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THE ARMOUR ENGINEER

General Index
Vol. I-XX
1909-1929

Compiled by
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condenser. 19:89;106. Mar. 1928.
- Boy surveyors in Wisconsin. A. B. Stevens. 19:15;30
Nov. 1927.
- Boy trail blazers. L. C. Kantner. 20:9. Nov. 1928.
- Boyles' laws. 1:198-199. May 1909.
- Bradbury, Gilbert V.
What does a college man know? 13:119-121. Jan. 1922.
- Brakes
Eddy current brakes. H. W. Nichols. 6:266-271.
May, 1914.
- Brakes, Air see Air Brakes.
- Brakes, Automobile,
Automobile brakes. 13:1-21. Nov. 1921.
Automobile brakes. Daniel Roesch. 15:91-94;112.
Mar. 1924. 15:135-139;151. May, 1924.
- Braley, Berton,
The thinker (poem). 12:52. Nov. 1922.
- Braun, William T.
Heating and ventilating of theater auditoriums.
9:45-56. Nov. 1916.
- Bready, I. J.
Recent developments in boiler feed water treatment.
16:47-50;73. Jan. 1925.

Bready, William Jr.

Cycloidal weir meter. 8:367-370. May. 1916.

Water softening. 9:24-29. Nov. 1916. 9:168-178.

Jan. 1917.

Demolition. 10:205-213. Mar. 1918.

Bricks,

Manufacture of concrete bricks. 18:53;72. Jan. 1927.

Bridges,

Deleware River Bridge. 18:22-23;28. Nov. 1926.

Fabrication. R. W. Johnson. 5:59-66. Jan. 1913.

New bridges from old. S. T. Corey. 17:66;76. Jan. 1926.

Railroad bridge abutments and piers. 6:107-113.

Jan. 1914.

Roosevelt road viaduct. Morris Grodsky. 12:173-188.

Mar. 1921.

Substructure of the Wabash Rouge River bridge at

Detroit, Mich. S. M. Smith. 13:250-255. May, 1922.

South Kedzie Ave., Chicago, Ill. J. C. Penn.

2:99-107. Jan. 1910.

Wabash Rouge River bridge at Detroit, Mich. S. M.

Smith. 13:250-255. May, 1922.

Bridges, Railroad,

New bridges from old. S. T. Corey. 17:66;76. Jan. 1926.

Railroad bridge abutments and piers. D. F. Holtman.

6:107-113. Jan. 1914.

Bridges, Reinforced concrete arch

South Kedzie Ave., Chicago, Ill. J. C. Penn. 2:99-

107. Jan. 1910.

Bridges, River

Deleware River bridge. 18:22-23;28. Nov. 1926.

Bridges, Steel

Fabrication. R. W. Johnson. 5:59-66. Jan. 1913.

Briquetting (fuel)

Briquetted coal. C. T. Malcolmson. 3:3-37. Jan. 1911.

Brock, Walter L.

An aero industry made over night. 7:3-8. Nov. 1914.

Brubaker, William C.

Modern passenger car truck. 6:203-215. Mar. 1914.

Brueckner roasting cylinder. 4:170. May, 1912.

Buckingham memorial fountain. H. E. Larson. 19:25;28.

Nov. 1927.

- Buffington, E. J.
 "Pittsburgh plus". 14:46;55. Jan. 1923.
- Building and operating a cider vinegar plant. J. J. Schommer. 12:1-16. Nov. 1920.
- Building codes. N. M. Stineman. 17:32;68;70. Jan. 1926.
- Building construction,
 Building to reduce fire losses. C. K. Stiff. 18:130-132;152. May 1927.
- Foundation construction of proposed commercial building.
 H. W. Clausen. 3:118-126. Jan. 1911.
- Burda, John, L.
 Pure oil. 18:48-49;58;72. Jan. 1927.
- Bureau of Standards. H. G. Boutell. 20:45-47;68. Jan. 1929.
- Busch-Sulzer Bros. Diesel Engine Co. A. J. Beerbaum. 5:131-146. May, 1913.
- Busch-Sulzer Diesel Engine operating table. 11:298. May, 1920.
- Business and the engineer. L. C. Thoelecke. 18:134-154. May, 1929.
- Business in perspective. Arthur Reynolds 15:47;71. Jan. 1924.
- Business letters,
 16,000,000,000 business letters last year. T. H. B. Whipple. 19:81-82. Mar. 1928.
- Business training for engineers. P. M. Atkins. 15:131-133;153. May, 1924.
- The Busy man (poem). 20:101. Mar. 1929.
- Cable, D. E.
 Research unit in the book paper industry. 18:94-96. Mar. 1927.
- Cables, see Telephone cables.
- Calorimeters and calorimetry,
 Calorimeters:
 Junkers 3:49. Jan. 1911.
 Sargent 3:50. Jan. 1911.
 Boys 3:53. Jan. 1911.
 Suminance-Abady 3:54.

Calorimeters and calorimetry (cont'd)

Gas calorimetry. C. E. Beck. 3:48-55. Jan. 1911.

Calumet Station of the Commonwealth Edison Company.

W. F. Sims. 13:151-154. Mar. 1922.

Camp Armour, see Field Practice in Surveying. A. I. T.

Camp Jackson, S. C.

Description of some engineering features involved in the construction of Camp Jackson, S. C. Stanley Dean. 9:107-122. Jan. 1917

Campbell, F. S.

Competitive design for a building for the Chicago Tribune. 14:37. Jan. 1923.

Camps - World War, 1917-18.

A description of some engineering features involved in the construction of Camp Jackson, S. C. Stanley Dean. 10:117-122. Jan. 1918.

Caoutchouc

Structure and molecular weight of caoutchouc. F. E. Barrows. 5:167-178. May, 1913.

Synthetic caoutchouc. A review compiled from the literature. 3:197-214. May, 1911.

Car heating,

Railway passenger car heating. E. W. Rietz. 9:232-247. Mar. 1917.

Car ventilation. D. I. Cook. 2:217-221. May 1910.

Carbon dioxide,

Progress of the industry. J. G. Hatman. 6:277-285. May, 1914.

Carpenter, A. H.

Recovery of vanadium from roscoelite ores. 13:184-195. Mar. 1922.

Carr, B. S.

Design, construction and calibration of apparatus proposed for advanced improvements in chemical conductivity tests. 9:120-136. Jan. 1917.

Manufacture of manganese steel castings. 10:155-186. Mar. 1918.

Carrying capacity of rapid transit systems. T. A.

Banning Jr. 1:208-229. May, 1909.

Cartwright, C. M.

Fire Protection engineering. 14:47;56. Jan. 1923.

Cast iron,

What and why is malleable iron. H. A. Schwartz.
11:95-110. Jan. 1920.

Catalysis,

Catalysis or contact action. B. B. Freud. 3:38-47.
Jan. 1911.

Cathedrals,

Impressions of four great cathedrals. C. D. Faulkner.
5:90. Jan. 1913.

Cellulose,

Cornstalks -- A scientific romance. I. G. Katz.
20:130-131;158;160;162. May, 1929.

Notes on the wood yard and wood room of the cellulose
mill. C. C. Heritage. 10:1-16. Nov. 1917.

Cellulose sulfate. Mfg. by the Ritter Kellner process.
C. C. Heritage. 8:44-51. Nov. 1915. 8:153-160.
Jan. 1916. 8:348-357. May, 1916.

Cement industry and trade,

Manufacture of Portland cement from blast furnace slag.
R. S. Huey. 3:188-196. May, 1911.
Portland cement concrete. W. E. Hart. 15:95-96;
110-111. Mar. 1924.

Central station power plants.

Storage batteries for central station power plants.
H. B. Marshall. 5:104-108. Jan. 1913.

Central station system substations. E. W. Grover.
10:81-106. Jan. 1918.

Application of protective relays to central station
practice. C. E. Stryker. 12:17-28. Nov. 1920.

Centrifugal pump efficiency. L. G. L. Thomas. 18:88-
90;116. Mar. 1927.

Champion, F. J.

Work of the forest products laboratory. 16:129-130;
152. May 1925.

Character,

Editorial by L. E. Powell. 8:186-187. Jan. 1916.

Characteristic. H. W. Nichols. 8:232-237. Mar. 1916.

Charles' laws. 1:198-199. May, 1909.

Charts,

Personal system and the consulting engineer. 1:31-39. Jan. 1909.

Chemical control in pharmaceutical manufacturing. H. W. Jones. 8:58-62. Nov. 1915.

Chemical engineering,

New ideas in chemical engineering. Editorial. 1:5-6. Jan. 1909.

Chemistry,

Laboratory instruction. Harry McCormack. 2:78-85. Jan. 1910.

Relation of chemistry to the development of the petroleum industry. J. W. Urban. 18:8-9;32;34. Nov. 1926.

Factors involved in the development of a new organic chemical process. C. C. Heritage. 11:255-268. May, 1920.

Chicago.

Bureau of fire prevention. J. B. Finnegan. 8:63-68. Nov. 1915.

Chicago lake front development. Linn White. 18:86-87;116. Mar. 1927.

Chicago lake front improvement. 17:65-66. Jan. 1926.

Chicago traffic signal system. C. S. Shaffer. 19:122-124;138. May 1928.

Chicago transportation problem. John Erickson (editorial). 7:147-149. Jan. 1915.

Harbor plan of Chicago. H. E. Larson. 19:86-88;108. Mar. 1928.

Plan of Chicago. E. S. Taylor. 17:7-8. Nov. 1925.

Some new buildings of Chicago railways. E. F. Hiller. 1:230-244. May, 1909.

South side retrospect. J. C. Feebles. 18:5-7;30. Nov. 1926.

Specifications of the Bureau of Streets. W. G. Lenninger. 2:176-196. May, 1910.

Chicago, Burlington and Quincy Railroad,

C. B. & Q. R. R. track elevation waterproofing. G. A. Haggander. 4:124-130. Jan. 1912.

Chicago lake front development. Linn White. 18:86-87;116. Mar. 1927.

Chicago, Milwaukee, St. Paul & Pacific R. R.

Evanston track elevation. E. O. Greifenhagen. 2:7-58. Jan. 1910.

Chicago railways,

Some new buildings of the Chicago railways. E. F. Hiller. 1:230-244. May. 1909.

- Chicago River,
 Chicago River Straightening. M. B. Golber. 20:85-87;110;112. Mar. 1929.
 Proposed straightening. H. E. Young. 17:152-153. May 1926.
- Chicago - Sanitary district,
 Modern sewage treatment in the Sanitary District of Chicago. F. W. Mohlman. 16:9-12;29-30. Nov. 1924.
- Chicago traffic signal system. C. S. Shaffer. 19:122-124;138. May, 1928.
- Chicago transportation problem. John Erickson (editorial). 7:147-149. Jan. 1915.
- Chicago Tribune,
 Competitive design for a building for the Chicago Tribune. E. S. Campbell. 14:37. Jan. 1923.
- Chicago water works,
 Latest tunnel connection near Chicago Avenue pumping station. H. W. Clausen. 6:3-22. Nov. 1913.
 The new southwest land and lake tunnel system of the Chicago waterworks. H. W. Clausen. 5:3-31. Jan. 1913.
- China,
 Engineering in China. R. L. Larson. 15:129-130;152. May, 1924.
- Chromium plating
 Chromium and chromium plating. I. G. Klein. 20:15;28;34. Nov. 1928.
- Chronograph
 Ballistic engineering. H. E. Stier. 20:94-95. Mar. 1929.
- Church architecture
 New Holy Trinity church; an account of its structural design. G. D. Arachovitis. 16:137-138;156. May 1925.
- Churchill, F. A.
 Field for highway engineers. 8:134-139. Jan. 1916.
- City planning
 Great American city of the future. J. L. Crane, Jr. 16:88;112. Nov. 1925.
 Importance of city planning. (Editorial). C. H. Wacker. 8:88-92. Nov. 1915.

Civil Engineering

Engineering and war. W. V. Judson. 7:135-140.

Jan. 1915.

Field for highway engineers. F. A. Churchill. 8:134-139. Jan. 1916.

Civil engineering corps of the Navy. R. W. Sturtevant.

17:129-130;160. May, 1926.

Clausen, H. W.

Foundation construction of proposed commercial building.

3:118-126. Jan. 1911.

Latest tunnel connection near Chicago Avenue pumping station, Chicago waterworks. 6:3-22. Nov. 1913.

New Southwest land and lake tunnel system of the Chicago waterworks. 5:3-31. Jan. 1913.

Coal

Preparation of coal for the western market. Benedict

Shubart. 16:51-53. Jan. 1925.

Purchase on specifications. W. O. Collins. 4:246-250. May, 1912.

Coal, see also Briquetting(fuel).

Coal costs in boiler plants. G. A. Grassby, Jr.

8:166-168. Jan. 1916.

Coal mines and mining

Mechanical loading underground in coal mines. Bene-

dict Shubart. 17:15-16;34;53-56;71;103-106;

137-139;164. Nov. 1925. Jan. 1926. March 1926, May, 1926.

Coal purchasing

Purchase of coal on specification and test. W. O.

Collins. 2:197-199. May, 1910.

Co-efficient of discharge for given fluids and pipe

sizes. J. M. Spitzglass. 9:312. May, 1917.

Coffeen, H. C.

Salesmanship. 12:29-30. Nov. 1920.

Coffeen, Harry Clay,

(Obituary) 16:20. Nov. 1924.

Cohen, Louis,

Recent developments in wireless telegraphy.

4:65-75. Jan. 1912.

Cohn, J. W.

A telephone call. 9:35-44. Nov. 1916. 9:179-

187. Jan. 1917.

Coke ovens

By product coke ovens. L. A. Sanford. 11:81-94.
Jan. 1920.

Cold storage

Features of the new Fulton Market cold storage warehouse. L. L. Edlund. 12:217-235. May, 1921.

College education

What does a college man know? G. V. Bradbury. 13:
119-121. Jan. 1922.

College student and the National Guard. R. S. Mayo.
17:101-102. Mar. 1926.

College students

College student and the National Guard. R. S. Mayo.
17:101-102. Mar. 1926.

Grading of college students. H. R. Phalen. 15:
11-14. Nov. 1923.

Collins, Charles W.

Illinois roads. 8:228-231. Mar. 1916.

Collins, W. O.

Purchase of coal on specification and test. 2:197-
199. May, 1910.

Purchase of coal on specifications. 4:246-250.
May, 1912.

Collision of α -particles with light atoms. Sir E.
Rutherford. 11:34-44. Nov. 1919.

Color and the motion picture. M. B. Golber. 20:48-49;
74;76;78. Jan. 1929.

Color photography

Art of color reproduction through process plates. D.
A. Patterson. 18:45-47. Jan. 1927.

Color photography (editorial). J. E. Snow. 6:225-
227. Mar. 1914.

Color reproduction

Art of color reproduction through process plates.
D. A. Patterson. 18:45-47. Jan. 1927.

Combustion

Combustion of fuel oil. Max Sklovsky. 11:269-279.
May, 1920.

Combustion engines, see Internal combustion engines.

Commencement addresses

An unofficial commencement address. J. C. Peebles.
19:131;146. May, 1928.

Commencement address to the class of 1928. S. L.
Avery. 20:5;30. Nov. 1928.

Comprehensive method of testing variable speed, variable
load gasoline engines. Daniel Roesch. 10:303-
307. May, 1918.

Computers for flow of liquid in pipes. 7:33-40.
Nov. 1914. A. H. Anderson.

Concrete

Mfg. of concretebricks. L. E. Grube. 18:53-72.
Jan. 1927.

Measuring aggregate for concrete. W. E. Hall.
17:95-97;106. Mar. 1926.

Concrete building. E. I. Silver. 4:85-100.
Jan. 1912.

Concrete-Reinforced

Design and construction of reinforced concrete building.
E. I. Silver. 4:85-100. Jan. 1912.

Equipment of reinforced concrete factory buildings.
M. W. Lee. 1:40-51. Jan. 1909.

A 100,000 gallon reinforced concrete tank. T. J.
Ferrenz. 5:157-167. May, 1913.

Reinforced concrete designing. Ernest McCullough.
1:268-280. May, 1909.

Concrete waterproofing. Arnold Pacyna. 6:186-202.
Mar. 1914.

Condensers

Influence of minnows in the circulating water of a
condenser. 19:89;106. Mar. 1928.

Conduits, Electric, see Electric conduits.

Confucius

One of the great religions of the world. N. J.
Zenner. 18:56;74. Jan. 1927.

Corrossion

Electrolytic corrosion and deterioration of under-
ground metals. W. P. McGuire. 2:231-241.
May, 1910.

Constants for various pipe sizes. J. M. Spitzglass.
9:311. May, 1917.

Continuation school

Efficiency -- education. H. W. Martin. 7:9-13.
Nov. 1914.

Converse, W. I.

Construction and operation of the Deering Southwestern
Railway. 8:305-318. May, 1916.

Cook County hospital

Some mechanical features. H. A. Durr. 7:41-50.
Nov. 1914.

Cook, D. I.

Car ventilation. 2:217-221. May, 1910.

Cook, E. C.

LeRhone aircraft engine testing. 11:123-130.
Jan. 1920.

Cook, E. V.

How did you die (poem). 12:195. Nov. 1921.

Cooley, L. E.

Illinois waterways (editorial). 7:142-146. Jan. 1915.

Cooley, M. E.

Responsibility of education. 15:9-10;31. Nov. 1923.

Cooley Prize

Old civilizations and our own. E. O. Pierce. Pt.1.
16:13-14. Nov. 1924. Pt.2. 16:59-60. Jan. 1925.

Cooling towers.

Properties of saturated and unsaturated air. G. F.
Beghardt. 1:204-205. May, 1909.

Corey, S. T.

New bridges from old. 17:66;76. Jan. 1926.

Cornstalks -- A scientific romance. I. G. Katz.

20:130-131;158;160;162. May, 1929.

Cost accounting

Cost plus vs. competitive bidding. R. M. Henderson.
14:69-70;84. Nov. 1923.

Costs and the engineer. G. F. Wetzel. 12:158-165.
Mar. 1921.

Cost accounting. G. F. Wetzel. 13:163-174. Mar. 1922.

Cost records

Personal system and the consulting engineer. R. M.
Henderson. 1:36-39. Jan. 1909.

Costs and the engineer. G. F. Welzel. 12:158-165.
Mar. 1921.

Council of National Defense
Dean H. M. Raymond appointed secretary (editorial)
10:130-132. Jan. 1918.

Crane, J. L. Jr.
Great American city of the future. 16:88;112.
Nov. 1925.

Crawford Avenue Station
Influence of minnows in the circulating water of a
condenser. J. H. Bowman. 19:89;106. Mar. 1928.

Crowley, R. W.
The diesel engine as a type. 7:209-214. Mar. 1915.

Crown, V. M.
Portsmouth water development. 11:3-11. Nov. 1919.

Crushing machinery
Crushing plants. Ellis Soper. 1:161-181. May, 1909.

Crushing plants. Ellis Soper. 1:161-181. May, 1909.

Culture
Mission of culture. G. L. Scherger. 14:71-72.
Mar. 1923.

Curtis, Marston
Transmission and contact systems used on the electri-
fied divisions of the CM&STP Ry. Co. 8:3-9.
Nov. 1915.

Curves
Performance curves of the engineer. W. J. Zenner.
19:54. Jan. 1928.

Cycloidal weir meter. Wm. Brady, Jr. 8:367-370.
May, 1916.

Dalton's laws. 1:197-198. May, 1909.

Dean, Stanley
Description of some engineering features involved in
the construction of Camp Jackson, Columbia, S. C.
10:117-122. Jan. 1918.
Efficiency tests of Schenectady power Co's. hydraulic
turbine units, nos. 2 & 3. 3:139-160. May, 1911.
Topographical survey of reservoir lands on Broad River,
S. C. 2:87-95. Jan. 1910.

Dean, W. T.
Electric driving of rolling mills. 3:84-102. Jan. 1911.

DeBeers, T. M.

Economic importance of multiple effect evaporation.
2:151-157. May, 1910.

Decision and experience. (Editorial). 13:159. Mar. 1922.

Decisions and their relation to success. G. W. Thompson.
19:10;14;30;36. Nov. 1927.

DeForest, Lee

My reminiscences of Armour Institute. 15:127-128;152.
May, 1924.

Deitenbeck, Max

The "Bef", a new three wheel electromobile. 5:179-166.
May, 1913.

Delaware river bridge. 18:22-23;28. Nov. 1926.

Demolition. Wm. Bready, Jr. 10:205-213. Mar. 1918.

Depots -- Railway

St. Paul Union Depot. G. H. Wilsey. 17:134-136;
160;162. May, 1926.

Development of fire foam. J. T. Even. 19:126-128.
May, 1928.

Detonation, see Gasoline, Anti-knock mixtures.

Diesel engines

Diesel engine in practice. C. E. Beck. 11:280-306.
May, 1920.

Diesel engines as a type. Its characteristics and
attempts at modification. R. W. Crowley. 7:209-
214. Mar. 1915.

Diesel engines. W. T. Watt. 19:83-85. Mar. 1928.

Light weight high speed Diesel engines. M. J.

Kittler. 20:134;135;152;154. May, 1929.

The new plant of the Busch-sulzer Bros. Diesel Engine
Co. 5:131-146. May, 1913.

Dietzsch, W. F.

Safety factor. 3:103-105. Jan. 1911.

Differentials and their use. C. I. Palmer. 13:108-118.
Jan. 1922.

Dilution of the crank case oil of automotive engines.

C. M. Larson. 15:53-54;63. Jan. 1924.

Direct current motor control. A new system. H. I.

Rosenthal. 12:145-157. Mar. 1921.

- Doubt, T. E.
(Editorial) 6:288-290. May, 1914.
Helium -- an account of its discovery and properties.
16:8;31;34. Nov. 1924.
- Downs, L. E.
Heat transmission tests of walls. 19:8-9;28.
Nov. 1927.
- Downs, W. E.
Construction of a Chicago water tunnel. 18:57-58.
Jan. 1927.
- Downton, P. G.
Engineering in farm lighting. 7:295-300. May, 1915.
- Dozois, H. H.
WENR -- The last word in radio stations. 20:136-137;
156;158. May, 1929.
- Drew, W. W. and R. A. Newlander
New Chicago telegraph building of the Western Union
Telegraph Co. 12:166-172. Mar. 1921.
- Durr, H. A.
Some mechanical features in the new Cook County
Hospital. 7:41-50. Nov. 1914.
- Dwight-Lloyd continuous machine. H. B. Pulsifer.
4:181;183. May, 1912.
- Dyblic reversing valve. 1:70. Jan. 1909.
- Dyes and dyeing
Investigation of the essential constituent of Turkey-
red oil, and its derivation. M. Woldenberg.
2:204-210. May, 1910.
- Dynamometer cars
Dynamometer car. R. H. Earle. 10:214-237. Mar. 1918.
- Earle, Ralph, H.
Developments in hydraulic turbines. Pt. 1. 20:12-13;
34. Nov. 1928. Pt. 2. 20:54;78;80. Jan. 1929.
Dynamometer car. 10:214-237. Mar. 1918.
Thomas electric gas meter. 11:181-194. Mar. 1920.
- Economic importance of multiple effect evaporation.
T. M. DeBeers. 2:151-157. May, 1910.
- Eddy current brakes. H. W. Nichols. 6:266-271.
May, 1914.

Education

- (Editorial) 1:6-8. Jan. 1909.
 After graduation -- what? W. J. Zenner. 19:53-54;
 56. Jan. 1928.
 Efficiency - education. H. W. Martin. 7:9-13.
 Nov. 1914.
 Place of spirit in education. 13:202-203. Mar. 1922.
 Responsibility of education. M. E. Cooley. 15:9-
 10;31. Nov. 1923.

Educational institutions.

- Utilities and educational institutions. G. K. Jones.
 20:8;32. Nov. 1928.

Editorials

- Advances in chemistry. Harry McCormack. 6:142-147.
 Jan. 1914.
 American ideals. Dr. G. L. Scherger. 10:338-345.
 May, 1918.
 Avoiding smoke, soot and dirt in steam generation.
 P. A. Poppenhusen. 8:179-182. Jan. 1916.
 Bolshevism and the American spirit. G. L. Scherger.
 11:49-52. Nov. 1914.
 Chicago transportation problem. John Erickson.
 7:147-149. Jan. 1915.
 Color photography. J. E. Snow. 6:225-227. Mar. 1914.
 Dr. George L. Scherger. 6:287-288. May, 1914.
 Electric vehicle practice as proposed by H. M. Ray-
 mond and D. P. Moreton. 7:58-60. Nov. 1914.
 Electrification of Chicago railway terminals.
 8:177-179. Jan. 1916.
 Engineer and a college man. 17:21. Nov. 1925.
 Engineer and the musician. T. Michels. 13:122-23.
 Jan. 1922.
 Engineer and the profession. 11:236-238. Mar. 1920.
 Engineer as a business man. 7:318-319. May, 1915.
 Engineer in industrial life. W. K. Wilson. 13:268-
 270. May, 1922.
 Engineer in public service. 8:372-376. May, 1916.
 Engineering and business. L. C. Monin. 9:268-270.
 Mar. 1917.
 Engineering and poetry. L. C. Monin. 9:270-271.
 Mar. 1917.
 An engineering education as preparation for the super-
 vision of courses in industrial arts. 9:348-352.
 May, 1917.
 Engineers and other experts from a newspaper stand-
 point. 8:267-270. Mar. 1916.
 Engineer's personal qualifications. E. H. Freeman.
 9:345-348. May, 1917.
 How to prepare our uncalled man-power. J. J. Schommer.
 10:254-257. Mar. 1918.
 Illinois waterway. L. E. Cooley. 7:142-146. Jan. 1915.

Editorials (cont'd).

- Importance of city planning. C. H. Wacker. 8:88-92.
Nov. 1915.
- Manufacturing principles. A. W. Rahn. 10:250-254.
Mar. 1918.
- Mrs. Julia Beveridge. In Memoriam. 11:46-49.
Nov. 1919.
- Misuse of the word engineer. Capt. N. M. Stineman.
10:140-141. Jan. 1918.
- Ethics of the engineering profession. D. L. C. Monin.
5:224-228. May, 1913.
- Necessity for studying Spanish in American schools of
various kinds and grades. J. A. L. Waddell.
8:83-88. Nov. 1915.
- On becoming a monthly (Armour Engineer). 20:16.
Nov. 1928; 20:56. Jan. 1928.
- Opportunities for the young man in corporations.
H. B. Hargey. 11:137-140. Jan. 1920.
- Passenger elevators. C. W. Naylor. 8:183-185.
Jan. 1916.
- A private and a president. W. L. Visscher. 10:346-
350. May, 1918.
- Reconstruction during and after the war. 10:136-138.
Jan. 1918.
- A reminiscence. J. E. Snow. 13:270-271. May, 1922.
- Responsibility of discrimination. H. F. McCormick.
7:149-151. Jan. 1915.
- Responsibility of the young engineer in advancing his
profession. 9:273-278. Mar. 1917.
- Resourcefulness of the engineer. 10:139-140.
Jan. 1918.
- Should engineers take part in politics. 9:188-193.
Jan. 1917.
- Specifications. A. E. Phillips. 6:139-141. Jan. 1914.
- Tact. 16:19. Nov. 1924.
- Thomas E. Doubt. 6:288-290. May, 1914.
- Twenty five years of AIT. (A retrospect and a promise).
L. C. Monin. 10:336-337. May, 1918.
- "Us engineers don't need no English". J. C. Peebles.
16:97-98. Mar. 1925.
- Value of a hobby. William Hoskins. 7:146-147.
Jan. 1915.
- War activities at Armour. 9:352. May, 1917.
- Young engineer's training. B. B. Freud. 4:294-296.
May, 1912.

Edlund, L. L.

- Features of the New Fulton Market cold storage ware-
house. 12:217-225. May, 1921.

Education

- Efficiency - Education. 7:9-13. Nov. 1914.

Efficiency

Efficiency - Education. 7:9-13. Nov. 1914.

Man as a machine. G. E. Marsh. 8:285-297. May, 1916.

Thoughts on efficiency studies. E. F. Hiller.

7:128-134. Jan. 1915.

Elastic limit by temperature measurement. J. C. Peebles.
6:272-276. May, 1914.

Electric automobile

The "Bef", a new three wheel electromobile. Max
Deitenbeck. 5:179-194. May, 1913.

Electric circuits

Alternating current. General expressions for alter-
nating current. G. E. Marsh. 2:211-216. May, 1910.

Electric conductors

Eddy current brakes. H. W. Nichols. 6:266-271.
May, 1914.

Electric conductors, see Electric cables, insulation,
(electric).

Electric conduits

Underground conduit for the distribution of electrical
energy. W. F. Sims. 1:182-195. May, 1909.

Electric current circuit, see Electric current rectifiers.

Electric currents

Bearing currents in machinery. E. H. Freeman.
6:100-106. Jan. 1914.

General expression for alternating current circuits.
G. E. Marsh. 2:211-216. May, 1910.

Electric distributing mains. G. E. Marsh. 2:66-70.
Jan. 1910.

Electric driving of rolling mills. W. T. Dean. 3:84-
102. Jan. 1911.

Electric furnaces

High temperatures electric resistance furnace. H. R.
Badger. 3:62-69. Jan. 1911.

Electric fuse for ordinary operating voltages. G. W.
Borst. 7:51-55. Nov. 1914.

Electric generators.

Higher harmonics in three phase systems. E. H. Free-
man. 4:200-204. May, 1911.

Electric motors

- Speed control for small motors. H. V. Nichols.
6:3-32. Nov. 1913.
- A study of direct current motor defects. A. H.
Wagner. 13:256-267. May, 1922.
- Slow speed motors and their application to recipro-
cating air compressors. R. O. Joslyn. 12:226-
239. May, 1921.

Electric railway valuation. H. R. Badger. 2:71-77.
Jan. 1910.

Electric railroads

- Application of automatic substations to interurban
lines. C. H. Jones. 12:91-95. Jan. 1921.
- Low tension feeder systems. R. H. Rice. 4:113-123.
Jan. 1912.
- Signaling for interurban electric railways. J. E.
Saunders. 7:249-263. May, 1915.
- Transmission and control systems used on the elec-
trified divisions of the C.M.&St.P.Ry. Co.
Marston Curtis. 8:3-9. Nov. 1915.
- Twenty years of electric railroading. P. V. See.
17:9-11. Nov. 1925.

Electric rates. G. E. Marsh. 7:89-110. Jan. 1915.

Electric service

- Industrial electric service in the southern states.
A. D. Quackenbush. 4:285-294. May, 1912.

Electric shock, see Electricity, injuries from.

Electric substations.

- Automatically controlled substations. H. N. Simp-
son. 8:326-335. May, 1916.

Electric transmission

- Electric tension, D. C. transmission. Francis
Fernandez. 5:185. May, 1913.
- Modern practice in high tension transmission.
Louis Elliott. 5:32-44. Jan. 1913.

Electric vehicle practice. H. M. Raymond and D. P.
Moreton. 7:58-60. Nov. 1914.

Electric welding

- Modern electric welding. N. S. Ewing. 20:10-11;
32. Nov. 1928.

Electrical distribution systems

- Low tension feeder systems for street railways. R. H.
Rice. 4:113-123. Jan. 1912.

Electrical energy

Underground conduits for distribution of electrical energy. W.F.Sims. 1:182-195. May 1909.

Electrical engineering

Electrical engineering. E.H.Freeman. 18:85;97.
Mar. 1927.

Electrical industry and the electrical engineer.
F.H.Berhard. 13:175-183. Mar. 1922.

Electrical equipment

Selection of electric equipment for steel mills. F.M.
Sturgess. 5:67-78. Jan.1913.

Electrical industry and the electrical engineer. F.B.
Bernhard. 13:175-183. Mar.1922.

Electrical inspection. V.H.Tousley. 6:225-247. Mar.
1914.

Electrical installation at the Gary works of the Indiana
Steel Co. E.D.MacEwing. 2:140-147. Jan.1910.

Electricity

Characteristics. H.W.Nichols. 8:232-237. Mar.1916.

Electricity the wonder worker. W.M.Seyfelich. 11:318-
326. May 1920.

Automatically controlled sub-stations. H.N. Simpson.
8:326-335. May 1916.

Electricity, Injuries from

Reflex stimulation in injuries from electricity. H.B.
Thomas. 6:37-46. Nov.1913.

Electrification, see, Railroads, Electrification

Electrification of Chicago railway terminals(Editorial)
8:177-179. Jan.1916.

Electrifying the Illinois Central Railroad suburban service
in Chicago. W.P. Monroe. 18:14-16. Nov.1926.

Electrolytic corrosion

Electrolytic corrosion and deterioration of underground metals. W.P.McGuire. 2:231-241. May 1910.

Electrons. G. E. Marsh, Jr. 1:96-107. Jan.1909.

Elevators

Elevators. A. H. Boehmer. 8:319-325. May 1916.

Its place in economics. C.W.Naylor(editorial)

8:183-185. Jan.1916.

Elliott, Louis

Modern practice in high tension transmission. 5:32-44.

Jan.1913.

Emerick, Frank

"Pittsburgh plus". 14:9-12;16-17. Nov. 1922.

Engine efficiency

Efficiency of the internal combustion engine. Daniel

Roesch. 9:313-318. May 1917.

Engineer and a college man. (editorial) 17:21. Nov.1925.

Engineer and the musician. T.Michels.(editorial) 13:122-123. Jan. 1922.

Engineer and politics

Should engineers take part in politics. (editorial)

9:188-193. Jan.1917.

Engineer and the profession. (editorial) 11:236-238.

Mar.1920.

Engineer and the world's future. H.R.Wing. 13:196-198.

Mar.1922.

Engineer as a business man. (editorial). 7:318-319.
May, 1915.

Engineer as a salesman. M. A. Smith. 17:102.
Mar. 1926.

Engineer as an advertising man. M. W. Lee. 17:11.
Nov. 1925.

Engineer as editor. A. H. Packer. 17:46. Jan. 1926.

The engineer awakes. F. H. Newell. 8:69-82. Nov. 1915.

Engineer in business. (editorial). 1:2-5. Jan. 1909.

Engineer in industrial life. (editorial). W. K. Wilson.
13:268-270. May, 1922.

Engineer in public service. 8:372-376. May, 1916.

Engineer in society. C. T. McDonald. 10:33-37. Nov.
1917.

Engineer in the community. 13:245-249. May, 1922.

Engineering

Comments of engineering specialization. R. M. Henderson. 13:160-162. Mar. 1922.

Engineering in China. R. L. Larson. 15:129-130;
152. May, 1924.

An essential of economic and military preparedness.
12:71-77. Jan. 1921.

Technical man in the rubber industry. A. H. Smith.
15:15-16;32. Nov. 1923.

Engineering and business. (editorial). L. C. Monin.
9:268-270. Mar. 1917.

Engineering and poetry. L. C. Monin. 9:270-271.
Mar. 1917.

Engineering college and the large city. H. M. Raymond.
1:115-137. May, 1909.

Engineering and war. W. V. Judson. 7:135-140.
Jan. 1915.

Engineering education

Business training for engineers. P. M. Atkins.
15:131-133;153. May, 1924.

Engineering colleges

Engineering college and the large city. H. M. Raymond.
1:115-137. May, 1909.

Engineering education

- Business training for engineers. P. M. Atkins. 15:131-133:153. May, 1924.
- Comments on engineering specialization. R. M. Henderson. 13:160-162. Mar. 1922.
- Engineering colleges and the large city. H. M. Raymond. 1:115-137. May, 1909.
- Engineering education as preparation for the supervision of courses in industrial arts. (editorial). 9:348-352. May, 1917.
- Engineering majors. C. R. Birdsey. 14:105;126. May, 1923.
- New ideas in chemical education. (editorial). 1:5-6. Jan. 1909.
- Technical man in the rubber industry. A. H. Smith. 15:15-16;32. Nov. 1923.
- Us engineers don't need no English. J. C. Peebles. 20:129;154;156. May, 1929.

Engineering - Ethics

- The engineer awakes. F. H. Newell. 8:69-82. Nov. 1915.
- Ethics of the engineering profession. Dr. L. C. Monin. 5:224-228. May, 1913.

Engineering opportunities

- Opportunities for the young man in corporations. H. B. Hargey. 11:137-140. Jan. 1920. (editorial).

Engineers

- Business and the engineer. L. C. Thoeleck. 18:134;154. May, 1927.
- Electrical engineering and the electrical engineer. F. H. Bernhard. 13:175-183. Mar. 1922.
- Engineer and the musician. T. Michels. 13:122-123. Jan. 1922.
- Engineer and the profession. 11:236-238. Mar. 1920.
- Engineer and the world's future. H. R. Wing. 13:196-198. Mar. 1922.
- Engineer as advertising man. U. W. Lee. 17:11. Nov. 1925.
- Engineer in business. (editorial). 1:2-5. Jan. 1909.
- Engineer in industrial life. (editorial). W. R. Wilson. 13:268-270. May, 1922.
- Engineer in the community. 13:245-249. May, 1922.
- Opportunities for the technical man in public service. F. G. Heuchling. 5:195-213. May, 1913.
- Position of the engineer in society. C. T. McDonald. 10:33-37. Nov. 1917.
- Resourcefulness of the engineer. (editorial). 10:139-140. Jan. 1918.

Engineers and other experts. (editorial). From a newspaper standpoint. 8:267-270. Mar. 1916.

Engineers personal qualifications. E. H. Freeman. (editorial). 9:345-348. May, 1917.

Engines, see
Gasoline engines
Gas and oil engines

Entropy
Entropy: What is it? C. V. Kerr. 10:123-129. Jan. 1917.

Erickson, John
Chicago transportation problem. (editorial). 7:147-149. Jan. 1915.

Ethics of the engineering profession. Dr. L. C. Monin. 5:224-228. May, 1913.

European tours. 19:96. Mar. 1928.

Eustice, A. L.
(Biographical sketch) 18:99-100. Mar. 1927.
Westinghouse Nernst lamp. 1:73-91. Jan. 1909.

Evans, P. W.
Calculation of data on coals and cinders for heat balances. 7:301-307. May, 1915.

Evaporation - Economic importance of multiple effect. T. M. DeBeers. 1:151-157. May, 1910.

Evaporative surface condenser. (Gebhardt, G. F., Properties of saturated and unsaturated air). 1:205-207. May, 1909.

Even, J. T.
Development of fire foam. 19:126-128. May, 1928.

Evolution of the skyscraper. A. N. Rebori. 4:52-64. Jan. 1912.

Ewing, N. S.
Friction loss in silk hose. 19:128. May, 1928.
Modern electric welding. 20:10-11;32. Nov. 1928.

Experiences of an architect. C. E. Wolfley. 16:15;32. Nov. 1924.

Factories
A new factory. F. G. Odgers. 12:41-44. Nov. 1920.

Factories (cont'd).

Factory Buildings. Equipment of reinforced concrete.

M. W. Lee. 1:40-51. Jan. 1909.

Factors in ventilation. W. O. Armspach. 10:238-244.

Mar. 1918.

Factors of design for two cycle oil engines. D. O.

Barrett. 8:10-29. Nov. 1915.

Factory buildings

Equipment of reinforced concrete. M. W. Lee.

1:40-51. Jan. 1909.

Factory management, see Scientific management.

Factory power. T. W. Simpson. 2:164-175. May, 1910.

Farm power

Transmitted power for the farm. F. C. VanEtten.

11:195-207. Mar. 1920.

Farm problem. I. W. Baughman. 4:193-199. May, 1912.

Farrell, F. B.

String-lining high speed railroad curves. 20:92-

93. Mar. 1929.

Farrel Mill. A. H. Smith. 15:15. Nov. 1923.

Faulkener, C. D.

Impressions of four great cathedrals. 5:90-97.

Jan. 1913.

Fernandez, Francis

High tension direct current transmission. 5:185-

194. May, 1913.

Ferrenz, Tirrell J.

A 100,000 gallon reinforced concrete tank. 5:157-

166. May, 1913.

Fessenden interference prementer. 4:73. Jan. 1912.

Field practice in surveying. A. E. Phillips.

7:263-268. May, 1915.

Field practice in surveying.

Boy surveyors in Wisconsin. A. B. Stevens.

19:15;30. Nov. 1927.

Boy trail blazers. L. C. Kantner. 20:9. Nov. 1928.

Field practice in surveying. (cont'd)

- AIT summer camp notes. 9:78-79. Nov. 1916.
- Summer camp. R. L. Lawson. 16:7;32. Nov. 1924.
- Summer camp. Walter Pittelkow. 18:11;34. Nov. 1926.
- Summer camp views. 8:108-109. Nov. 1915.
- Summer of 1914. J. C. Penn. 7:269-273. May, 1915.

Fifty foot interferometer telescope. T. G. Pease.
16:125-128. May, 1925.

Filters and filtration. Charles Ness. 6:126-137.
Jan. 1914.

Financial training

- Importance of financial training. Carl Heim. 16:
92;112. Mar. 1925.

Finnegan, Joseph B.

- Chicago bureau of fire prevention and public safety.
8:63-68. Nov. 1915.
- National fire loss. 2:59-65. Jan. 1910.

Fire alarms

- Fire alarm systems. C. D. Whitney. Pt. 1. 16:89-
91;107. Mar. 1925. Pt. 2. 16:134-136. May, 1925.

Fire extinguishers

- Chemical fire extinguishers. N. F. Kimball. 12:240-
250. May, 1921.
- Development of fire foam. J. T. Even.. 19:126-128.
May, 1928.

Fire foam

- Development of fire foam. J. T. Even.. 19:126-128.
May, 1928.

Fire hazards

- Mfg. of pigments, as seen by the insurance engineer.
J. R. Wilson. 5:147-156. May, 1913.

Fire hazards in fuel storage. R. E. Kilbourne.

20:138-139;158. May, 1929.

Fireproof houses. H. S. Powers. 1:52-61. Jan. 1909.

Fire prevention, see Fire protection.

Fire protection

- Automatic control of fire. Fitzhugh Taylor.
4:226-245. May, 1912.
- Automatic sprinkler. C. R. Alling. 4:131-137.
Jan. 1912.
- Building to reduce fire losses. C. K. Stiff.
18:130-132;152. May, 1927.

Fire protection (cont'd)

- Chicago bureau of fire prevention and public safety.
J. B. Finnegan. 8:63-68. Nov. 1915.
- Field of fire prevention and fire protection engineering. N. T. Kimball. 10:187-203. Mar. 1918.
- Fire hazards in fuel storage. R. E. Kilbourne.
20:138-139;158. May, 1929.
- Fire tests of building columns. N. F. Kimball.
10:107-116. Jan. 1918.
- Interior standpipes and hose systems. N. F. Kimball.
9:10-23. Nov. 1916.
- Manufacturing of pigments, as seen by the insurance engineer. J. R. Wilson. 5:147-156. May, 1913.
- Snapshot at fire prevention. R. E. Vernor. 14:6.
Nov. 1922.
- Sparks for the engineer. R. E. Vernor. 15:140;152.
May, 1924.
- Fire protection engineering. C. M. Cartwright.
14:47 56. Jan. 1923.
- Fire protection engineering course starts. 2:2-4.
Jan. 1910.
- Fire protection engineering society. Engineering
scholarships. 6:294-296. May, 1914.
- Fire pumps. Fitzhugh Taylor. 4:226-245. May, 1912.
- Fire pumps centrifugal. E. E. Maher. 7:274-294.
May, 1915.
- Fire resistance, see Fire protection.
- Fire tests of building columns. N. F. Kimball.
10:107-116. Jan. 1918.
- Fire Underwriters Association.
Tribute of the underwriters. 13:43-46. Nov. 1921.
- Fires
Building to reduce fire losses. C. K. Stiff.
18:130-132;152. May, 1927.
- National fire loss. J. B. Finnegan. 2:59-65.
Jan. 1910.
- Fisher, A. E.
Classification of books. 11:131-133. Jan. 1920.
- Flag. 10:246-248. Mar. 1918.
- Flanders, L. H.
Hydrometer in the operation of storage batteries.
1:143-160. May, 1909.

Flinn, M. S.

Anthracite producer gas for fuel purposes. 3:213-225. May, 1911.

Flood lighting.

Modern light painting. R. H. Harridge. 19:93-94. Mar. 1928.

Flooring

Treated wood block for factory flooring. C. H. Teesdale. 8:258-265. Mar. 1916.

Flow of liquids

Calculations and measurements of the flow of liquids.

J. M. Naiman. 11:17-33. Nov. 1919. Pt. 2. 11:110-122. Jan. 1920.

Flow of liquids and frictional resistance in pipes.

J. M. Spitzglass. 19:223-231. Mar. 1917. 302-312. May, 1917.

Measuring flow of liquids electrically. Spitzglass

and Freeman. 14:73-74;79-80;94. Mar. 1923.

Spitzglass computer. 7:33-40. Nov. 1914.

Flow of water - diagram. H. W. Youngberg. 2:108-109.

Jan. 1910.

Flux of light method of performing illumination calculations.

W. E. Barrows. 4:3-29. Jan. 1912.

Flynn, J. M.

From news to newspaper. 20:88-90;112. Mar. 1929.

Pt. 2. 20:132-133;150;152. May, 1929.

Ford, T. C.

Systematic inspection of bituminous pavements.

8:123-129. Jan. 1916.

Ford, T. S.

Artesian water in the Orient. 3:56-61. Jan. 1911.

Forest products Laboratory. F. J. Champion. 16:

129-130;152. May, 1925.

Forestry

Forests of the U. S. Leonard Lundgren. 7:235-248.

May, 1915.

Forests of the U. S. Leonard Lundgren. 7:235-248.

May, 1915.

Foss, S. W.

House by the side of the road. (poem) 13:47-48.

Nov. 1921.

Fraser and Chalmer's furnace. 4:168. May, 1912.

Freeman, E. H.

Bearing currents in machinery. 6:100-106. Jan. 1914.

Electrical engineering. 18:85;97. Mar. 1927.

Higher harmonics in three phase systems. 4:200-214.

May, 1912.

Measuring the flow of liquids electrically. J. M.

Spitzglass & (Freeman). 14:73-74;79-80;94.

Mar. 1923.

Resourcefulness of the engineer. (editorial).

10:139-140. Jan. 1918.

Freud, B. B.

Catalysis, or contact action. 3:38-47. Jan. 1911.

Fritch, D. C.

Chicago railroad terminal problem. 4:144-148.

Jan. 1912.

Friction loss in silk hose. N. S. Ewing. 19:128.

May, 1928.

From news to newspapers. J. M. Flynn. 20:88-90;112.

Mar. 1929. Pt. 2. 20:132-133;150;152. May, 1929.

Fuel

Briquetted coal. C. T. Malcolmson. 3:3-37. Jan. 1911.

Combustion of fuel oil. Max Sklovsky. 11:269-279.

May, 1920.

Fulton market cold storage warehouse. L. L. Edlund.

12:217-225. May, 1921.

Furnaces

Economy oil burning furnaces. L. H. Badger. 12:78-90.

Jan. 1921.

Electrical induction furnace. W. M. Seyferlich. 11:

211-221. Mar. 1920.

High grade malleable iron. Air furnace mfg.

George B. Stantial. 18:50-52;58. Jan. 1927.

High temperature electric furnace. H. R. Badger. 3:42-63. Jan. 1911.

World's largest blast furnace. Weirton stack.

Heat transference in furnaces. Max Sklovsky. 6:169-

185. Mar. 1914.

Fuses, see Electric fuses.

Future of American highways. H. J. Armstrong. 7:121-

127. Jan. 1915.

Garbage reduction plant of Columbus Ohio. J. J.

Schommer. 9:319-331. May, 1917.

Garfield, Arthur

A private and a president. W. I. Visscher. (editorial.) 10:346-350. May, 1917.

Gary steel plant.

Morgan gas producer installation at Gary steel plant.

W. R. Wilson. 1:62-72. Jan. 1909.

Gary works of the Indiana steel works. Electrical installation. 2:140-147. Jan. 1910. E. D. MacEwing.

Gas and oil engines

Factors of design for two cycle oil engines. D. O.

Barrett. 8:10-29. Nov. 1915.

The MEP of gas engines. Daniel Roesch. 8:213-227. Mar. 1916.

The Mietz and Weiss oil engine. E. E. Maher. 4:251-261. May, 1912.

Testing gasoline motors. Daniel Roesch. 10:303-307. May, 1918.

Gas Calorimetry. C. E. Beck. 3:48-55. Jan. 1911.

Gas engine operating data. Daniel Roesch. 5:51-58. Jan. 1913.

Gas problems -- Logarithmic coordinate in gas problems. J. M. Spitzglass. 2:123-139. Jan. 1910.

Gas producers

Morgan gas producer installation at Gary. W. R. Wilson. 1:62-72. Jan. 1909.

Gases, Industrial.

Industrial gases. C. C. Hotchkiss. 6:79-99. Jan. 1914.

Gasoline -- Antiknock and antiknock mixtures.

Audibility spark-advance antiknock tests. Daniel Roesch. 19:132-133; 156. May, 1928.

Comprehensive method of testing variable speed load gasoline engines. Daniel Roesch. 10:303-307. May, 1918.

What price knock? 18:54-55; 72. Jan. 1927. Daniel Roesch.

Soothing the internal combustion engine. Daniel Roesch. 17:50-51. Jan. 1926.

Gates Gytratory breakers. (Illus.) 1:166. May. 1909.

Gages

Vacuum gage. 15:143; 156. May, 1924.

Gearing

Impact machine gearing for testing. M. C. Shedd. 1:251-259. May, 1909.

- Gebhardt, G. F.
 Properties of saturated and unsaturated air. 1:196-207. May, 1909.
 Special testing equipment in Mechanical Engineering Dept. 12:31-40. Nov. 1920.
 Steam power plant engineering. (Book review). 10:258-259. Mar. 1918.
- Gelatin
 Technology of gelatin. F. R. Johnson. 15:49-51;70. Jan. 1924.
- Getting by. (editorial). 12:193-194. Mar. 1921.
- Glass
 Siloxide, an unrivalled substitute for quartz glass. Dr. I. G. Thomas. 5:79-89. Jan. 1913.
- Goggles
 Investigation of safety goggles at Underwriters Laboratories. S. V. James. 9:57-65. Nov. 1916.
- Golber, M. B.
 Chicago river straightening. 20:85-87;110;112. Mar. 1929.
 Color and the motion picture. 20:48-49;74;76;78. Jan. 1929.
 World's largest pumping station. 20:6-7;26. Nov. 1928.
- Goodmanson, J. H.; E. A. Klein; J. O. Peckham.
 Charles Steinmetz. 15:141-142;154. May, 1924.
- Government rights of way for irrigation. Leonard Lundgren. 8:161-165. Jan. 1916.
- Grading of college students. H. R. Phalen. 15:11-14. Nov. 1923. Pt. 2. 15:55-58;77. Jan. 1924.
- Grassby, G. A. Jr.
 Coal costs in boiler plants. 8:166-168. Jan. 1916.
- Great American city of the future. J. L. Crane Jr. 16:88;112. Mar. 1925.
- Greater contest. B. E. Sunny. 13:37-39. Nov. 1921.
- Greifenhagen, E. O.
 Evanston track elevation, Chicago Milwaukee and St. Paul R. R. 2:7-58. Jan. 1910.
- Griffenhagen, see Greifenhagen.

- Griffith, J. R.
Northwestern University stadium. 18:12-13. Nov. 1926.
- Grodsky, Morris
Roosevelt road viaduct. 12:173-188. Mar. 1921.
- Grover, E. W.
Central station system substations. 10:81-106.
Jan. 1918.
- Grube, L. E.
Manufacture of concrete bricks. 18:53;72. Jan. 1927.
- Gunsaulus, Dr. F. W.
Death obituaries. 12:259-267. May, 1921.
Engineering an essential of economic and military
preparedness. 12:71-77. Jan. 1921.
Message to Freshman class. 1917. 10:51-55. Nov. 1917.
Sparks from Dr. Gunsaulus' lectures. 12:53. Nov. 1920.
Tablet presented to AIT by F. U. Assn. of N. W.
13:plate opp. p. 49. Nov. 1921.
Tribute of the underwriters. 13:43-46. Nov. 1921.
- Gypsum
Modern use of gypsum. F. A. Manske. 19:46-48;68;72;
74. Jan. 1928.
- Haggander, G. A.
C. B. & Q. R. R. track elevation waterproofing.
4:124-130. Jan. 1912.
- Hammond, C. H.
Home traveling scholarship. 2:222-230. May, 1910.
- Hammond, E. K.
Utilization of blast furnaces gases. 4:32-44.
Jan. 1912.
- Harbor plan of Chicago. H. E. Larson. 19:86-88;108.
Mar. 1928.
- Harbors
Harbor plan of Chicago. H. E. Larson. 19:86-88;108.
Mar. 1928.
Portsmouth water development. V. M. Crown. 11:3-11.
Nov. 1919.
- Harding, W. G.
An appreciation. (portrait). 15:6-7. Nov. 1923.
- Hargey, J. B.
Opportunities for the young man in corporations.
(editorial). 11:137-140. Jan. 1920.

Harmonics (electric waves).

Higher harmonics in three phase systems. E. H. Freeman. 4:200-214. May, 1912.

Harper, R. B.

(Biographical sketch). 18:139. May, 1927.

Harridge, R. H.

Modern light painting. 19:93-94. Nov. 1928.

Harris, R. B.

Pneumatic ash handling systems. 3:106-113. Jan. 1911.

Hart, W. E.

Measuring aggregates for concrete. 17:95-97;106.
Mar. 1926.

Portland cement concrete. 15:95-96;110;111.
Mar. 1924.

Harvey, W. F.

Some creosoted wood block pavements in Chicago.
4:215-225. May, 1912.

Hatman, J. G.

Natural gas and its distribution. 4:138-143.
Jan. 1912.

Progress of carbon dioxide industry. 6:277-285.
May, 1914.

Heat balance

Calculation of data on coals and cinders in heat
balance. P. W. Evans. 17:301-307. May, 1915.

Heat flow through building walls. J. C. Peebles. 13:
235-244. May, 1922.

Heat loss

Heat flow through building walls. J. C. Peebles.
13:235-244. May, 1922.

Heat transference in furnaces. Max Sklovsky. 6:169-
185. Mar. 1914.

Heat transmission tests of walls. L. E. Downs.
19:8-9;28. Nov. 1927.

Heat treatment

High speed steel and its heat treatment. W. G. Smith. 2:110-122. Jan. 1910.

Heat value calculator. C. C. Sampson. 1:92-95.
Jan. 1909.

Heath, C. S.

Utility of the pyrometer on carburated water gas machine. 3:161-187. May, 1911.

Heating

Heating of theater auditoriums. W. T. Braun. 9:45-56. Nov. 1916.

Heim, Carl

Importance of financial training. 16:92;112. Mar. 1925.

Heinen, E. J.

Planning and erection of power plants. 3:232-237. May, 1911.

Helicopters

Some power requirements of aircraft. Daniel Roesch. 13:223-234. May, 1922.

Helium

An account of its discovery and properties. T. E. Doubt. 16:8;31;34. Nov. 1924.

Henderson, Roy M.

Biographical sketch. 16:17-18. Nov. 1924.

Comments on engineering specialization. 13:160-162. Mar. 1923.

Cost plus vs. competitive bidding. 14:69-70;84. Mar. 1923.

Personal system and the constructing engineer. 1:25-39. Jan. 1909.

Some provisions of the contract. 17:89-90. Mar. 1926.

Hendricks, Walter

A letter to you from Europe. 8:135-138. May, 1927.

Words-words-words. 19:45. Jan. 1928.
see also, Poems

Heritage, C. C.

Factors involved in the development of a new organic chemical process. 11:255-268. May, 1920.

Manufacture of sulphite cellulose by the Ritter Kellner process. 8:44-51. Nov. 1915. 8:153-160.

Jan. 1916. 8:348-357. May, 1916.

Notes on the wood yard and wood room of the cellulose mill. 10:1-16. Nov. 1917.

Synthetic phenol manufacture. 9:216-222. Mar. 1917.

Heuchling, F. G.

Opportunities for the technical man in public service. 5:195-213. May, 1913.

High speed steel and its heat treatment. W. G. Smith.

2:110-122. Jan. 1910.

- High temperature electric resistant furnace. H. R. Badger. 3:62-69. Jan. 1911.
- Highways, see Roads.
- Hiller, E. F.
Some new buildings of the Chicago railways co. 1: 230-244. May, 1909.
Thoughts on efficiency studies. 7:128-134. Jan. 1915.
- Hills, Charles W.
Patent privilege in the U. S. 15:99-100;114. Mar. 1924.
- Hobbies
Value of a hobby. William Hoskins. (editorial). 7:146-147. Jan. 1915.
- Holtman, D. F.
Railroad bridge abutments and piers. 6:107-113. Jan. 1914.
Some observations on lumber and timber. 17:12-14;32. Nov. 1925.
- Holy Trinity Church
New Holy Trinity church; an account of its structural design. G. D. Arachovitis. 16:137-138;156. May, 1925.
- Home traveling scholarship. C. H. Hammond. 2:222-230. May, 1910.
- Honor roll. AIT. 10:266-280. May, 1918.
- Hoover, Herbert.
As an engineer. 12:112-114. Jan. 1921.
- Horsepower meter. G. F. Gebhardt. 12:31-32. Nov. 1920.
- Hoskins, William
Value of a hobby. (editorial). 7:146-147. Jan. 1915.
- Hospitals
Some mechanical features in the new Cook County hospital. H. A. Durr. 7:41-50. Nov. 1914.
- Hotchkiss, C. C.
Industrial gases. 6:79-99. Jan. 1914.
- House by the side of the road. S. W. Ross. (poem). 13:47-48. Nov. 1921.
- Houston, H. S.
Youth and the new world. 15:52;72. Jan. 1924.

- How did you die? E. V. Cook. 12:195. Mar. 1921.
 How does a student spend his spare time? 13:284-5. May 1922.
 Hubbard, Elbert
 "Message to Garcia". (review). 16:103;105. Mar. 1925.
- Huey, R. 'S.
 Manufacture of Portland cement from blast furnace slag.
 3:188-196. May, 1911.
 Value of records to an operating engineer. 9:137-144.
 Jan. 1917.
- Huntington-Heberlein pot. 4:174. May, 1912.
- Huntly, F. C.
 Armour and the merchant marine. 10:17-21. Nov. 1917.
 Tests of wire rope fittings. 19:51-52. Jan. 1928.
- Hydraulic turbines, see Turbines.
- Hydraulics
 Interior standpipes and hose systems. N. F. Kimball.
 9:10-23. Nov. 1916.
- Hydro electric machinery
 Developments in hydraulic turbines. R. H. Earle.
 Pt. 1. 20:12-13;34. Nov. 1928.
 Pt. 2. 20:54;78;80. Jan. 1929.
- Hydro electric plants
 Developments in hydraulic turbines. R. H. Earle.
 Pt. 1. 20:12-13;34. Nov. 1928.
 Pt. 2. 20:54;78;80. Jan. 1929.
 Efficiency tests of Schenectady Power Co's hydraulic
 turbine numbers 2 and 3. 3:139-160. May, 1911.
 Topographical survey of reservoir lands on Broad River,
 S. C. Stanley Dean. 2:86-95. Jan. 1910.
- Hydrogen
 Table of atomic weight. 9:202-203. Jan. 1917.
- Hydrogenation
 Oil hydrogenation, Herbert Sieck. 14:13-15. Nov.
 1922.
- Hydrometer in the operation of storage batteries.
 L. H. Flanders. 1:143-160. May, 1909.
- Hyperbola. 2:123-139. Jan. 1910.
- Ideal must be attainable. L. C. Monin. 11:134-137.
 Jan. 1920.
- Illinois roads. C. W. Collins. 8:228-231. Mar. 1916.

Illinois waterway

Illinois waterway. L. E. Cooley. (editorial).

7:142-146. Jan. 1915.

The status of the Illinois waterway. Murray Blanchard.

18:133;138. May, 1927.

Illuminating, see Lighting.

Illumination calculations. Bibliography. 4:30-31.

Jan. 1912.

Imhoff tanks. 16:9-12;29-30. Nov. 1924.

Impact machine and its equipment for testing draft gears.

M. C. Shedd. 1:251-259. May, 1909.

Importance of financial training. Carl Heim. 16:92;112.

Mar. 1925.

Impression of four great cathedrals. C. D. Faulkner.

5:90-97. Jan. 1913.

Impulse water wheels, see Water wheels.

Increasing boiler furnace efficiency. C. E. Beck.

2:96-98. Jan. 1910.

Industrial arts

An engineering education as preparation for the supervision of courses. (editorial). 9:348-352.

May, 1917.

Industrial gases. C. C. Hotchkiss. 6:79-99. Jan. 1914.

Inexpensive fireproof house. H. S. Powers. 1:52-61.

Jan. 1909.

Influence of minnows in the circulating water of a condenser.

J. H. Bowman. 19:89;106. Mar. 1928.

Initiative. J. O. Armour. 10:333. May, 1918.

Inspection - Electrical, see Electrical inspection.

Insulating materials

Insulation of sound by double partitions. P. E.

Sabine. 17:131-133. May, 1926.

Insull, Samuel

Address to Alumni Ass'n. "Production and distribution of energy". Dec. 1911. 4:152. Jan. 1912.

A letter. (an occasion of merging with NW Univ.).

17:94. Mar. 1926.

Insurance and the insurance engineer. A. M. Jens.
7:111-120. Jan. 1915.

Insurance -- Fire insurance and the insurance engineer.
A. M. Jens. 7:111-120. Jan. 1915.

Interior standpipes and hose systems. N. F. Kimball.
9:10-23. Nov. 1916.

Internal combustion engine.

AIT internal combustion engine engineering laboratory.

Daniel Roesch. 10:102-106. Jan. 1918.

Efficiency of internal combustion engines. Daniel
Roesch. 9:313-318. May, 1917.

Factor tests of internal combustion engines. Daniel
Roesch. 20:96-97;116. Mar. 1929.

Fuel and air mixing devices for internal combustion
engines. Daniel Roesch. 12:96-105. Jan. 1921.

Internal combustion engines. Daniel Roesch. 17:50-
51. Jan. 1926.

Interpole

Forced ventilation and interpole. (editorial).

1:9-11. Jan. 1909.

Ira Pettibone -- Optimist. (poem). W. B. Amsbary. 14;24.
Nov. 1922.

Iron

High grade malleable iron. G. B. Stantial. 18:50-52;
58. Jan. 1927.

What and why is malleable iron. H. A. Schwartz.
11:95-110. Jan. 1920.

Irrigation

Government rights of way for irrigation. Leonard Lund-
gren. 8:161-165. Jan. 1916.

James, S. V.

Automobile brakes. 13:1-21. Nov. 1921.

Investigation of safety goggles at Underwriters Lab-
oratories. 9:57-65. Nov. 1916.

Power necessary to drive an aeroplane. 3:226-231.
May, 1911.

Present status of the problem of aeroplane stability.
6:27-36. Nov. 1913.

Role of the aerodynamical laboratory in the develop-
ment of aeronautics. 4:101-112. Jan. 1912.

Stresses in ships. 10:281-301. May, 1918.

Jens, A. M.

Insurance and the insurance engineer. 7:111-120.
Jan. 1915.

- Johnson, F. R.
Technology of gelatins. 15:49-51;70. Jan. 1924.
- Johnson, J. B.
Design of retaining walls. 8:337-347. May, 1916.
- Johnson, R. W.
Some practical considerations in the fabrication of steel bridges. 5:57-66. Jan. 1913.
- Jones, C. H.
Application of automatic substations to interurban lines. 12:91-95. Jan. 1921.
- Jones, G. R.
Utilities and educational institutions. 20:8;32. Nov. 1928.
- Jones, H. W.
Chemical control in pharmaceutical manufacturing. 8:58-62. Nov. 1915.
- Joslyn, R. O.
Slow speed motors and their application to reciprocating air compressors. 12:226-239. May, 1921.
- Judson, R. W.
Biographical sketch. 17:145-158. May, 1926.
- Judson, Lieut. Col. W. V.
Engineering and war. 7:135-140. Jan. 1915.
- Juergensen, F. H.
Stage lighting. 20:52-53;66;68. Jan. 1929.
- Katz, I. G.
Cornstalks -- A scientific romance. 20:130-131;158;160;162. May, 1929.
- Kantner, L. C.
Boy trailblazers. 20:9. Nov. 1928.
- Kerr, C. V.
Entropy: What is it? 10:123-129. Jan. 1917.
- Ketchikan region, see Alaska.
- Kilbourne, R. E.
Fire hazards in fuel storage. 20:138-139;158. May, 1929.
- Kiley, L. D.
On active service with the American Expeditionary Force. (Letters) 10:370-376. May, 1918.

Kimball, N. F.

- Chemical fire extinguishers. 12:240-250. May, 1921.
- Field of fire prevention and fire protection engineering.
10:187-203. Mar. 1918.
- Fire tests of building columns. 10:107-116. Jan. 1918.
- Interior standpipes and hose systems. 9:10-23.
Nov. 1916.
- Planning and production control. 15:48;70. Jan. 1924.

Kipling, Rudyard

- Secret of the machines. (poem) 12:114-115. Jan. 1921.

Kittler, M. J.

- Light weight high speed Diesel engines. 20:134-135;152;
154. May, 1929.

Klein, E. A.

- Charles Steinmetz. by J. H. Goodmanson, E. A. Klein,
J. O. Peckham. 15:141-142;154. May, 1924.

Klein, I. G.

- Chromium and chromium plating. 20:15;28;34. Nov. 1928.

Krum, H. L.

- Morkrum telegraph printer. 7:308-315. May, 1915.

Kutter and Chezy formulas. 2:108. Jan. 1910.

- Laboratories- Underwriters'. O.R. Besch. 19:90-92;114. Mr.1928.
- Laboratory instruction in industrial chemistry. Harry
McCormack. 2:78-85. Jan. 1910.

Lamps

- Westinghouse Nernst lamp. A. L. Eustice. 1:73-91.
Jan. 1909.

Landis, Major Reed

- Speaks before AIT alumni. Feb. 22, 1928. Hotel La-
Salle, Chicago. 19:95-96. Mar. 1928.

Largest locomotive in the world. 18:67-68. Jan. 1927.

Larson, C. M.

- Dilution of the crank case oil of automotive engines.
15:53-54;63. Jan. 1924.

Larson, F. E.

- Buckingham memorial fountain. 19:25;38. Mar. 1927.
- Continuous two speed system of automatic control.
19:125;144;146. May, 1928.
- Harbor plan of Chicago. 19:86-88;108. Mar. 1928.
- North side sewage treatment plant. 19:49-50;56.
Jan. 1928.

Larson, R. L.

Engineering in China. 15:129-130;152. May, 1924.

Latest tunnel connection near the Chicago pumping station,
Chicago water works. H. C. Clausen. 6:3-22.
Nov. 1913.

Lawson, R. L.

Summer camp, AIT. Trout Lake, Wisc. 16:7:32.
Nov. 1924.

Lead ores

Roasting and sintering lead ores. H. B. Pulsifer.
4:163-192. May, 1912.

Lee, M. W.

Advertising for the practical engineer. 14:7-8.
Nov. 1922.

Engineer as advertising man. 17:11. Nov. 1925.
Equipment of reinforced concrete factory buildings.
1:40-51. Jan. 1909.

Leininger, W. G.

City pavement maintenance and repair work in Chicago.
7:173-180. Mar. 1915.

Specification of the bureau of streets of Chicago.
2:176-196. May, 1910.

Le Rhone aircraft engine testing. E. C. Cook. 11:
123-130. Jan. 1920.

Light weight high speed Diesel engines. M. J. Kittler.
20:134-135;152;154. May, 1929.

Lighting

Electric lighting plants in small villages. G. I.
Stadeker. 8:238-244. Mar. 1916.

Engineering in farm lighting. P. G. Downton. 7:295-
300. May, 1915.

Electric lighting plants in small villages. G. I.
Stadeker. 8:238-244. Mar. 1916.

Flux of light methods of performing illumination cal-
culations. W. E. Marrows. 4:3-29. Jan. 1912.

Modern light painting. R. H. Harridge. 19:93-94.
Mar. 1928.

Municipal versus public utility operation of an elec-
tric lighting plant. C. R. Shuler. 17:17-18;34.
Nov. 1925.

Locomotives

Largest locomotive in the world. 18:67-68. Jan. 1927.

Logarithmic coordinates. Spitzglass, J. M. 2:123-139.
Jan. 1910.

Lohner, C. L.

Engineering and progress in the packing industry.
20:91;118. Mar. 1929.

London guarantee and accident bldg. (plate). Alfred S.
Alschuler. 14:38. Jan. 1923.

Low tension feeder systems for street railways. R. H.
Rice. 4:113-123. Jan. 1912.

Lumber

Some observations on lumber and timber. D. F. Holtman.
17:12-14;32. Nov. 1925.

Standardization of lumber. C. E. Paul. 12:189-192.
Mar. 1921.

Lundgren, E. L.

Talk on the Philippine Islands. 4:271-284. May, 1912.

Lundgren, Leonard

Government rights of way for irrigation. 8:161-165.
Jan. 1916.

Forests of the United States. 7:235-248. May, 1915.

Water powers of Southeastern Alaska. 8:30-43. Nov. 1915.
8:245-257. Mar. 1916. 8:358-366. May, 1916.

M. E. P. of a gas engine. Daniel Roesch. 8:216-227.
Mar. 1916.

McCormack, Harry,

Laboratory instruction in industrial chemistry.
2:78-85. Jan. 1910.

The McMuller process for sugar manufacture. 3:250-
258. May, 1911.

Oxidation of atmospheric nitrogen to produce compounds
of nitrogen. 6:142-147. Jan. 1914.

McCullough, Ernest

Reinforced concrete designing. 1:268-280. May, 1909.

McDonald, C. T.

Position of the engineer in society. 10:33-37.
Nov. 1917.

Macdowell, C. H.

Alunite. 15:134;153-154. May, 1924.

McGuire, W. P.

Electrolytic corrosion and deterioration of underground
metals. 2:231-241. May, 1910.

McMullen, E. W.

New method of sugar manufacture. 1:260-267. May 1909.

McMullen process for sugar manufacture. Harry McCormack.

3:250-258. May 1911.

MacEwing, E. D.

Electrical installation at the Gary works of the Indiana

Steel Co. 2:140-147. Jan.1910.

Macbeth's flux scale. 4:9. Jan.1912.

Maher, E. E.

Centrifugal fire pump. 7:274-294. May 1915.

Mechanical refrigeration. 3:238-249. May 1911.

Mietz and Weiss oil engine. 4:251-261. May 1912.

Maintenance fund drive--results. 18:59. Jan.1927.

Making work a game. L. K. Sillcox. 12:106-111. Jan.1921.

Malcolmson, C. T.

Briquetted coal and its value as a railroad fuel. 3:3-37.

Jan.1911.

Malleable iron, see, Cast iron.

Man as a machine. G. E. Marsh. 8:285-297. May 1916.

Man of intellect. J. C. Peebles. 18:98. Nov.1927.

Manske, R. D.

Modern uses of gypsum. 19:46-48; 68; 72; 74. Jan.1928.

Manufacture of manganese steel castings. B. S. Carr.

10:155-186. Mar. 1918.

Marco, Fred

Armour Tech radio station. "9YL". 14:114-115; 126.

May 1923.

Marsh, G. E.

Electric rates. 7:90-110. Jan. 1915.

Electrons. 1:96-107. Jan. 1909.

General expressions for alternating current circuits.

2:211-216. May1910.

Graphical representation of certain factors relating
to electric distributing mains. 2:66-70. Jan. 1910.

Man as a machine. 8:285-297. May 1916.

Mipgameter. 9:332-335. May 1917.

Marshall, H. B.

Storage batteries for small central station power plants
5:104-108. Jan.1913.

Marti, O. K.

Modern mercuryarc power rectifiers. 19:11; 28. Nov.1927.

Martin, H. W.

Efficiency - education. 7:9-13. Nov. 1914.

Mathematics

Differentials and their use. C. I. Palmer. 13:108-118.
Jan.1922.

Mayo, R. A.

College student and the National Guard. 17:101-102.

Mar.1926.

Mean effective pressure. Daniel Roesch. 6:256-265. May 1914.

Measuring the flow of liquids electrically. J. M. Spitz-
glass and E. H. Freeman. 14:73-74; 79-80; 94. Mar.1923.

Mechanical loading

Mechanical loading underground in coal mines. Benedict
Shubart. 17:15-16; 34; 53-56; 71; 103-106; 137-139; 164.
Jan., Mar., May 1926.

Mechanics, Department of - Founded. 7:61. Nov.1914.

Memorial resolutions on the death of Mrs. F. D. Armour
and Mr. J. Odgen Armour. 19:7. Nov. 1927.

Merchant marine

Armour and the merchant marine. P. C. Huntly. 10:17-21.
Nov. 1917.

Mercury arc rectifiers

Modern mercury arc power rectifiers. O. K. Martin. 19:11;
28. Nov. 1927.

Merrill, W. H.

Fire protection engineering department. A.I.T.1903.
15:23. Nov. 1923.

Message to Garcia. Elbert Hubbard (review) 16:103-105.
Mar. 1925.

Metallurgical plants in the vicinity of Chicago. H. B.
Pulsifer. 7:14-22. Nov. 1914.

Metallurgy

Mettalurgical plants in the vicinity of Chicago.

H. B. Pulsifer. 7:14-22. Nov. 1914.

Recovery of vanadium from roscolite ores. A. H. Carpenter. 13:184-195. Mar. 1922.

Meters

Cycloidal weir meter. Wm. Brady, Jr. 8:367-370.

May, 1916.

Thomas electric gas meter. R. H. Earle. 11:181-194.
Mar. 1920.

Michels, T.

Engineer and the musician. (Editorial). 13:122-123.
Jan. 1922.

Mietz and Weiss oil engine. E. E. Maher. 4:251-261.

May, 1912.

Miles-per gallon meter. (Mipgometer). G. E. Marsh.

9:332-335. May, 1917.

Military engineering

General duties and work of the military engineer.

9:336-344. May, 1917.

Mipgometer. G. E. Marsh. 9:332-335. May, 1917.

Mission of culture. G. L. Scherger. 14:71-72.

Mar. 1923.

Misuse of the word engineer. Capt. N. M. Stineman.

(editorial). 10:140-141. Jan. 1918.

Models

Model aeroplanes. W. E. Schweitzer. 16:16;30.

Nov. 1924.

Modern farm problems and the engineer. I. N. Baughman.

4:193-199. May, 1912.

Modern light painting. R. H. Harridge. 19:93-94.

Nov. 1928.

Modern mercury arc power rectifiers. O. K. Marti.

19:16;28. Nov. 1927.

Modern passenger car truck. W. C. Brubaker. 6:203-

215. Mar. 1914.

Modern practice in high tension transmission. Louis

Elliot. 5:32-44. Jan. 1913.

- Modern sewage treatment in the Sanitary district of Chicago. Mohlman, F. W. 16:9-12;29-30. Nov. 1924.
- Modern uses of gypsum. R. D. Manski. 19:46-48;68;72;74. Jan. 1928.
- Mohlman, F. W.
Modern sewage treatment in the Sanitary district of Chicago. 16:9-12;29-30. Nov. 1924.
- Monin, L. C.
An address on Occasion of merging with N. W. Univ. 17:91-92. Mar. 1926.
An alumnus says farewell. 18:129. May, 1927.
Engineering and business. (editorial). 9:268-270. Mar. 1917.
Engineering and poetry. (editorial). 9:270-271. Mar. 1917.
"Ethics of the engineering profession". 5:224-228. May, 1913.
An expression from the faculty on the resignation of Dean Monin. 18:128. May, 1927.
A farewell address. 18:125-27. May, 1927.
The ideal must be attainable. (editorial). 11:134-137. Jan. 1920.
Letter from L. C. Monin. 19:19. Nov. 1927.
Letter to the graduating class, 1928. 19:121;138. May, 1928.
Students' message to Dean Monin. 18:128. May, 1927.
Twenty-five years of AIT. (A retrospect and a promise.) (editorial). 10:336-337. May, 1918.
- Monroe, W. P.
Electrifying the Illinois central railroad suburban service in Chicago. 18:14-16;34. Nov. 1926.
- Morgan gas producer installation at Gary. W. R. Wilson. 1:62-72. Jan. 1909.
- Morkrum telegraph printer. H. R. Krum. 7:308-315. May, 1915.
- Moskovics, F. E.
Past, present, and future trends in motor car design. 13:22-26. Nov. 1921.
Resigns from Stutz Motor Co. 20:104. Mar. 1929.
- Motors, Electric, see Electric motors.
- Moving pictures
Color and the motion picture. M. B. Golber. 20:48-49;74;76;78. Jan. 1929.

Municipal versus public operation of an electric lighting plant. C. R. Shaler. 17:17-18;34. Nov. 1925.

Musicians

Engineer and the musician. 13:122-123. Jan. 1922.

Nachman, Henry L.

"Elements of Machine Design". Book review. 10:351.
May, 1918.

Naiman, J. M.

Calculation and measurement of the flow of fluids in pipes. 11:17-33. Nov. 1919. 11:110-122. Jan. 1920.
Measurement of flow. 14:75-76;81-84. Mar. 1923.
14:106-112;123. May, 1923.

National fire loss. J. B. Finnegan. 2:59-65. Jan. 1910.

National defense

Our national defense policy. C. L. Bolte. 16:85-87;
110. Mar. 1925.

National guard

College student and the National guard. R. S. Mayo.
17:101-102. Mar. 1926.

National tuberculosis ass'n.

Hunters in the dark. A. Schaeffer, Jr. 19:34.
Nov. 1927.

Natural gas and its distribution. J. G. Hatman. 4:138-
143. Jan. 1912.

Nedved, R. J.

Recent successes of the Dept. of Architecture. 16:95-
96;107. Nov. 1925.

Nelson, E. L.

Transmitting equipment for radio telephone broadcasting.
16:93-94;109. Mar. 1925. 16:131-133;157;161.
May, 1925.

Nernst lamp

Westinghouse nernst lamp. A. L. Eustice. 1:73-91.
Jan. 1909.

Ness, Charles

Filters. 6:126-137. Jan. 1914.

New bridges from old. S. T. Corey. 17:66;76. Jan. 1926.

A New factory. P. G. Odgers. 12:41-44. Nov. 1920.

New method of sugar manufacture. E. W. Mullen. 1:260-267. May, 1909.

Newell, F. H.

The engineer awakes. 8:69-82. Nov. 1915.

Newlander, R. A.

New Chicago telegraph building of the Western Union

Telegraph Co. W. W. Drew and R. A. Newlander.

12:166-172. Mar. 1921.

Newspapers

From news to newspapers. J. M. Flynn. 20:88-90;112.

Mar. 1929. 20:132-133;150;152. May, 1929.

Nichols, H. W.

Characteristics. 8:232-237. Mar. 1916.

Eddy current brakes. 6:266-271. Mar. 1914.

Speed control for small motors. 6:23-26. Nov. 1913.

Symbolic representation of alternating current quantities.

4:45-51. Jan. 1912.

Talking from New York to London. 15:19-20;32. Nov. 1923.

North side sewage treatment plant. H. E. Larson. 19:49-50;56. Jan. 1928.

Northwestern University stadium. J. R. Griffith.

18:12-13. Nov. 1926.

Nozzles for impulse water wheels. A. H. Anderson. 1:200-203. May. 1910.

Obituararies:

Alling, Claude R. 18:18. Nov. 1926.

Freeman, Clarence E. 20:17. Nov. 1928.

Miller, W. E. 19:16. Nov. 1927.

Powers, Horace Sweet. 20:21. Nov. 1928.

Smalley, J. S. 19:16. Nov. 1927.

Urban, John W. 20:17. Nov. 1928.

O Captain! My captain. Walt Whitman. 12:268. May. 1921.

Octave chanute medal (footnote). 4:113-123. Jan. 1912.

Odgers, P. G.

A new factory. 12:41-44. Nov. 1920.

Oehne, W. S.

External forces acting on an aeroplane when in motion.
4:262-270. May, 1912.

Oil burning furnaces. L. H. Badger. 12:78-90.
Jan. 1921.

Oil hydrogenation. Herbert Sieck. 11:13-15. Nov. 1922.

Oils -- pine, see Pine oil.

Old civilizations and our own. E. D. Pierce.
16:13-14:31-32. Nov. 1924.
16:59-60. Jan. 1925.

Open hearth furnaces

Morgan gas producer installation at Gary. W. R.
Wilson. 1:62-72. Jan. 1909.

Opportunities for the technical man in public service.
T. G. Heuchling. 5:195-213. May, 1913.

Opportunity (editorial). 9:67-69. Nov. 1916.

Organization and the individual. W. R. Wilson. 9:3-9.
Nov. 1916.

Organization charts

Personal systems and the constructing engineer. R. M.
Henderson. 1:25-39. Jan. 1909.

Organization -- diagram. 2:72. Jan. 1910.

Ossein flow sheet.

Technology of gelatin. T. R. Johnson. 15:70. Jan. 1924.

Our national defense policy. C. L. Bolte. 16:85-87. 110.
Mar. 1925.

Oxidation of atmosphere

Nitrogen to produce compounds of nitrogen. Harry
McCormack. 6:142-147. Jan. 1914.

Packer, A. H.

Engineer as an editor. 17:46. Jan. 1926.

Packing industry

Engineering and progress in the packing industry. C.
L. Lohner. 20:91;118. Mar. 1929.

Pacyna, Arnold

Waterproofing of concrete. 6:186-202. Mar. 1914.

Palaces

Where kings have lived. J. H. Bischof. 5:97-103.
Jan. 1913.

Palmer, Irwin Claude

Biographical sketch. 18:142. May, 1927.
Differential and its use. 13:108-118. Jan. 1922.

Panama

Army and civilian methods of handling materials in
Panama. 8:298-304. May, 1916.

Paper industry and trade.

Cornstalks -- a scientific romance. I. G. Katz.
20:130-131;158;160;162. May, 1929.
Notes on the wood yard and wood room of the cellulose
mill. C. C. Heritage. 10:1-16. Nov. 1917.
Research unit in the book paper industry. D. E. Cable.
18:94-96. Mar. 1927.

Parks

Chicago lake front development. Linn White. 18:86-
87;116. Mar. 1927.

Parsons, H. N.

How ball bearings are made. 17:47-49;70. Jan. 1926.
17:98-100. Mar. 1926.

Participation (editorial). 14:48. Jan. 1923.

Past, present and future trends in motor car design.

F. E. MosKovics. 13:22-26. Nov. 1921.

Patent system

Some comments on the patent system. T. A. Banning, Jr.
7:23-32. Nov. 1914.

Patents

Patent privilege in the U. S. C. W. Hills. 15:99-
100;114. Mar. 1924.
Some comments on the patent system. T. A. Banning, Jr.
7:23-32. Nov. 1914.

Patterson, D. A.

Art of color reproduction through process plates.
18:45-47. Jan. 1927.

Patrick, W. . and G. C. Wilsnack

New volumetric method for tin. 5:45-50. Jan. 1913.

Paul, C. E.

Standarization of lumber. 12:189-192. Mar. 1921.

Pavements

- Asphaltic highway construction. D. T. Pierce.
8:130-139. Jan. 1916.
City pavement maintenance and repair work in Chicago.
W. G. Leininger. 7:173-180. Mar. 1915.
Some crested wood block pavements in Chicago.
W. F. Harvey. 4:215-225. May, 1912.
Systematic inspection of bituminous pavements. T. C.
Ford. 8:123-129. Jan. 1916.

Pease, F. G.

- Biographical sketch. 17:57-58. Jan. 1926.
Fifty foot interferometer telescope. 16:125-128.
May, 1925.
The 100 inch Hookes reflecting telescope of the Mount
Wilson Observatory. 11:307-316. May, 1920.
World's largest telescope constructed by Armour Tech
Alumnus. 20:21. Nov. 1928.

Pearson, A.

- Satisfactory method for the determination of benzene
and toluene in crude toluol. 10:38-48. Nov. 1917.

Peckham, J. O.

- Charles Steinmetz. by J. H. Goodmansson, E. A. Klein,
J. O. Peckham. 15:141-142;154. May, 1924.

Feebles, J. C.

- Alumni. 14:85-86. Mar. 1923.
Elastic limit by temperature measurement. 6:272-276.
May, 1914.
Heat flow through building walls. 13:235-244. May,
1922.
A man of intellect. 18:98. Mar. 1927.
Measurement of temperature. 3:70-83. Jan. 1911.
South side retrospect. 18:5-7;30. Nov. 1926.
An unofficial commencement address. 19:131;146.
May, 1928.
Unofficial observer. 18:60;78. Jan. 1927; 18:98.
Mar. 1927; 18:140. May, 1927.
"Us engineers don't need no English." 16:97-98;114.
Mar. 1925. 20:129;154;156. May, 1929.

Penn, John C.

- Biographical sketch. 18:142. May, 1927.
Camp Armour --- Summer of 1914. 7:269-273. May, 1915.
South Kedzie Avenue (Chicago) reinforced concrete arch
bridge. 2:99-107. Jan. 1910.

Performance curves of the engineer. 19:54. Jan. 1928.

Periodic system. W. D. Harkins. 9:199-204. Jan. 1917.

Personal system and the constructing engineer. R. M.
Henderson. 1:25-39. Jan. 1909.

Personality

Engineering personality. 12:50-51. Nov. 1922.

Petroleum industry

Relation of chemistry to the development of the petrol-
eum industry. 18:8-9;32;34. Nov. 1926.

Phalen, H. R.

Grading of college students. 15:11-14. Nov. 1923.
15:55-58;77. Jan. 1924.

Pharmaceutical manufacturing

Chemical control in pharmaceutical manufacturing. H.
W. Jones. 8:58-62. Nov. 1915.

Phenol

Synthetic phenol manufacturing. C. C. Heritage.
9:216-222. Mar. 1917.

Philip D. Armour Jr. Memorial window. 20:9. Nov. 1928.

Philippine Islands. E. L. Lundgren. 4:271-284.
May, 1912.

Phillips, A. E.

Engineering field practice, Armour Institute of Tech-
nology. 7:263-268. May, 1915.

Photography

Art of color reproduction through process plates.

D. A. Patterson. 18:45-47. Jan. 1927.

Color and the motion picture. M. B. Golber.

20:48-49;74;76;78. Jan. 1929.

Physical interpretation of thermodynamic principles.

J. M. Spitzglass. 7:192-199. Mar. 1915.

Physics

Radioactivity and atomic structure. J. T. Thompson.

18:91-93;97. Mar. 1927.

Pierce, D. T.

Asphaltic highway construction. 8:130-139. Jan. 1916.

Pierce, E. O.

Old civilizations and our own. 16:13-14;31-32.

Nov. 1924. 16:59-60. Jan. 1925.

Piers

Railroad bridges, abutments and piers. 6:107-113.

Jan. 1914.

Piers, see Bridges, Railroad

Pigments

Manufacturing of pigments as seen by the insurance engineer.
J. R. Wilson. 5:147-156. May 1913.

Pine oil. J. L. Burda. 18:48-49; 58; 72. Jan. 1927.

Pitot tubes for air. A. H. Anderson. 1:245-250. May 1909.

Pittelkow, Walter

Summer camp. 18:11; 34. No. 1926.

"Pittsburgh plus" E. J. Buffington. 14:46; 55.
Jan. 1923.

Place of spirit in education. 13:202-203. Mar. 1922.

Planning and production control. N. F. Kimball. 15:48;
70. Jan. 1924.

Pneumatic ash handling systems. R. B. Harris. 3:106-113.
Jan. 1911..

Poems:

Afterthought. Walter Hendricks. 19:64. Jan. 1928.

Busy man. anom. 20:101. Mar. 1929.

Childhood's renewal. F. W. Gunsaulus. 19:136.

May 1928.

Desire to live. J. E. Allen. 20:18. Nov. 1928.

Elves. Walter Hendricks. 19:103. Mar. 1928.

Failure and success. anom. 20:22. Nov. 1928.

House by the side of the road. S.W. Ross. 13:47-48.

Nov. 1921.

How did you die. E. V. Cook. 12:195. Nov. 1921.

Ira Pettibone - optimist. W.B. Amsbary. 14:24.

Nov. 1922.

Just suppose. anom. 20:62. Jan. 1929.

Life and death. Ernest Crosby. 20:145. May 1929.

My philosophy. James Whitcomb Riley. 20:105.

Mar. 1929.

Overtones. W. A. Percy. 20:146. May 1929.

Philosopher. J. K. Bangs. 20:61. Jan. 1929.

Secret of the machines. Rudyard Kipling. 12:114-115.

Jan. 1921.

Shoppin' for color. Aramis. 19:103. Mar. 1928.
 "Spunk" anom. 20:106. Mar. 1929.
 The text. anom. 20:143. May 1929.
 The thinker. Berton Braley. 12:52. Nov. 1922.
 We never reach the goal. Edgar A. Guest. 20:36.
 Nov. 1929.
 What is good. John Boyle O'Reilly. 20:57.
 Jan. 1929.
 Words. Walter Hendricks. 20:58. Jan. 1929.

Poisson's ratio. 6:272-276. May 1914.

Portland cement, see Cement industry and trade.

Portsmouth water development, V. M. Crown. 11:3-11.
 Nov. 1919.

Position of the engineer in society. C. T. McDonald.
 10:33-37. Nov. 1917.

Potash

Alunite, a promising source of potash. C. H. McDonald.
 15:134; 153-154. May 1924.

Power(mechanics)

Factory power. T. W. Simpson. 2:164-175. May 1910.

Power, see also Compressed Air, and Electric Power.

Power for the farm

Transmitted power for the farm. F. C. Van Etten.
 11:195-207. Mar. 1920.

Power plants

Calumet station of the Commonwealth Edison Company.

W.F.Sims. 13:151-159. Mar. 1922.

Planning and erection of power plants. E.J. Heinen.
 3:232-237. May 1911.

Powers, H. S.

An inexpensive fireproof house. 1:52-61. Jan. 1909.

Preparation of coal for the western market. Benedict
 Shubart. 16:51-53. Jan. 1925.

Preparedness

Relation of the engineer to national preparedness. Dr.
Isham Randolph. 8:169-176. Jan. 1916.

Presentation of tablet in memory of Dr. Frank W. Gunsaulus.

By. W. R. Townley. 13:43-46. Nov. 1921.

Preservation of wood from decay. C. H. Teesdale. 7:200-208.

Mar. 1915.

Pressure distribution curves

From data resulting from tests on the 12 in. hyperbolic
elbow installed at the 25th Street Station of the
Kansas City Gas Co., Kansas City, Mo. 14:92. Mar. 1923.

Mean effective pressure. Daniel Roesch. 6:256-265.

May 1914.

Prime movers.

In Electrical installation at the Gary Works of the
Indiana Steel Company. E.D. MacEwing. 2:144.
Jan. 1910.

In Factory power. T.W. Simpson. 2:171-172. May 1910.

A private and a president. W.L. Visscher (editorial)

10:346-350. May 1918.

Producer gas

Acthracite producer gas for fuel purposes. N.S. Flinn.

3:213-225. May 1911.

Properties of saturated and unsaturated air. G. F.

Gebhardt. 1:196-207. May 1909.

Public utilities

Municipal versus public utility operation of an electric lighting plant. C. R. Shuler. 17:17-18;34. Nov. 1928.

Reorganization on the basis of public utility commission valuation. (editorial) 1:139-140. May, 1909.

Utilities and educational institutions. G. L. Jones. 20:8;32. Nov. 1928.

Public utility commission

Difficult problems. H. C. Abell. 1:12-24. Jan. 1909.

Public utility property valuation. Leslie Weiss. 12:251-258. May, 1921.

Pulsifer, E. B.

Metallurgical plants in the vicinity of Chicago. 7:14-22. Nov. 1914.

Roasting and sintering lead ores. 4:163-192. May, 1912.

Winning zinc blends. 8:140-152. Jan. 1916.

Pumping stations

Construction of a Chicago water tunnel. W. E. Downs. 18:57-88. Jan. 1927.

Influence of minnows in the circulating water of a condenser. 19:89;106. Mar. 1928.

World's largest pumping station. M. B. Golber. 20:6-7;26. Nov. 1928.

Pumps, Centrifugal

Centrifugal fire pump. Maher. E. E. 7:274-294. May, 1915.

Centrifugal pump efficiency. 18:88-90. L. G. I. Thomas. Mar. 1927.

Pupin, Michael

Review of "From immigrant to inventor". 16:28. Nov. 1924.

Purchase of coal on specification and test. W. C. Collins. 2:197-199. May, 1910.

Pyrometers and pyrometry

Measurement of temperature. J. C. Peebles. 3:70-73. Jan. 1911.

Utility of the pyrometer on carbureted water gas machine. C. S. Heath. 3:161-187. May, 1911.

Quackenbush, W. D.

Industrial electric service in the southern states. 4:285-293. May, 1912.

Quartz glass

Siloxide, an unrivalled substitute for quartz glass.

Dr. I. F. Thomas. 5:79. Jan. 1913.

Questionnaire

How does a student spend his spare time? 13:284-285.

Nov. 1922

Radiators, Automobile, see Automobile engines - Radiators.

Radio activity

Collision of α -particles with light atoms. Sir E. Rutherford. 11:34-44. Nov. 1919.

Radio activity and atomic structure. J. S. Thompson. 18:91-93;97. Mar. 1927.

Radio broadcasting

Transmitting equipment for radio telephone broadcasting.

E. L. Nelson. 16:93-94;109. Mar. 1925.

13:131-133;151. May, 1925.

Radio engineering.

Armour Tech radio station "9YL". Fred Marco. 14:114-115;126. May, 1923.

Radio stations

WENR - The last word in radio stations. W. E. Dozois. 20:136-137;158. May, 1929.

Radio telephone

Talking from N. Y. to London. H. W. Nichols. 15:19-20;32. Nov. 1923.

Radio telegraph

submarine radio telegraphy. H. DeForest Stevers. 11:12-16. Nov. 1919.

Radiophone broadcasting. (editorial) 13:272. May, 1922.

Radium clock. 18:93. Mar. 1927.

Rahn, A. A.

Manufacturing principles. (editorial) 10:250-254. Mar. 1918.

Railroad bridge abutments and piers. D. F. Holtman.

6:107-113. Jan. 1914.

Railroad curves

String lining high speed railroad curves. T. B. Farrell. 20:92-93. Mar. 1929.

Railroad train control

Continuous two speed system of automatic trail control. H. E. Larson. 19:125;144. May, 1928.

Railroads

Construction and operation of the Deering Southwestern Railway. A. I. Converse. 8:305-318. May, 1916.

Making work a game. L. K. Sillcox. 12:106-111. Jan. 1921.

Railroad passenger car heating. E. W. Rietz. 9:232-247. Mar. 1917.

Some new buildings of the Chicago railways. E. F. Hills. 1:230-244. May, 1909.

Railroads (cont'd)

Track capacity and rapid transit service. (Editorial)
1:140-142. May, 1909.

Railroads - Electrification

Electrifying the Illinois Central Railroad suburban service
in Chicago. 18:14-16;34. Nov. 1926.

Transmission and contact systems used on the electrified
divisions of the C. M. & St. P. Ry. Co. Marston Curtis.
8:3-9. Nov. 1915.

Railroad terminals

Chicago railway terminal problem. L. C. Fritch. 4:144-
148. Jan. 1912.

St. Paul Union depot. G. H. Wilsey. 17:134-136;160;162.
May, 1926.

Railway passenger car heating. E. W. Rietz. 9:232-247.
Mar. 1917.

Railway signaling. J. E. Saunders. 10:308-313. May, 1918.

Railway track elevations. E. O. Greifenhagen. 2:7-58.
Jan. 1910.

Randolph, Dr. Isham

Relation of the engineer to national preparedness. 8:169-
176. Jan. 1916.

Rapid transit systems - Carrying capacity. T. A. Banning, Jr.
1:208-229. May, 1909.

Raymond, Dean Howard M.

Appointed secretary of Technical schools of the Illinois
section on industrial training for war emergency council
of national defense. (editorial). 10:130-132. Jan. 1918.

The institute: its beginning, past, present, and future.
17:86-88. Mar. 1926.

Portrait of 14:5. Nov. 1922.

Rebori, A. N.

Evolution of the skyscraper. 4:52-64. Jan. 1912.

Records

Value of records to an operating engineer. R. S. Huey.
9:131-144. Jan. 1917.

Rectification

Modern mercury arc power rectifiers. O. K. Martin. 19:
11;28. Nov. 1927.

Tantalum electrolytic valve. C. E. Stryker. 16:54-56;73.
Jan. 1925.

Reed, E. H.

"The significance of the fine arts". A book for everyone.
(book review) 14:113. May, 1923.

- Reflex stimulation or management of electrical shock. H. B. Thomas. 6:37-46. Nov. 1913.
- Refractory materials
Aluminate-A promising source of potash. C. H. MacDowell.
- 15:134;153-154. May, 1924.
- Refrigeration and refrigerating machinery
Mechanical refrigeration. E. E. Maher. 3:238-249.
May, 1911.
- Reinforced concrete designing. Ernest McCullough. 1:268-280. May, 1909.
- Relation of chemistry to the development of the petroleum industry. J. W. Urban. 18:8-10;32;34. Nov. 1926.
- Relation of the engineer to national preparedness. Dr. Isham Randolph. 8:169-176. Jan. 1916.
- Religion
One of the great religions of the world. W. J. Zenner. 18:56;74. Jan. 1927.
- Reorganization on the basis of public utility commission valuations. (editorial) 1:139-140. May. 1909.
- Reports, Technical, see Technical reports
- Responsibility of discrimination. H. F. McCormick. 7:149-151. Jan. 1915.
- Responsibility of education. M. E. Cooley. 15:9-10;31. Nov. 1923.
- Responsibility of the young engineer in advancing his profession. (editorial). 9:273-278. Mar. 1917.
- Resuscitation
Reflex stimulation or management in electrical shock.
H. B. Thomas. 6:37-46. Nov. 1913.
- Reynolds, Arthur
Business in perspective. 15:47;71. Jan. 1924.
- Rice, R. H.
Engineer in the community. 13:245-249. May, 1922.
Low tension feeder systems for street railways. 4:113-123. Jan. 1912.
- Rietz, E. W.
Railway passenger car heating. 9:232-247. Mar. 1917.
- Ritter-kellner process of manufacturing of sulphite cellulose.
C. C. Heritage. 8:44-51. Nov. 1915. 8:153-160. Jan. 1916. 8:348-357. May, 1916.

Rivers

Chicago river straightening. M. B. Golber. 20:85-87;
110;112. Mar. 1929.

Roads

Ashphaltic highway construction. D. T. Pierce. 8:130-139.
Jan. 1916.

Future of American highways. H. J. Armstrong. 7:121-127.
Jan. 1915.

Illinois roads. C. W. Collins. 8:228-231. May, 1916.

Road engineering. Raymond Zack. 11:208-210. Mar. 1920.

Roesch, Daniel

Armour Institute of Technology internal combustion engineering laboratory. 10:102-106. Jan. 1918.

Audibility, spark-advance, anti-knock tests. 19:132-133;
136. May, 1928.

Automobile brakes. 13:1-21. Nov. 1921. 15:91-94;112.

Mar. 1924. 15:135-139;151. May, 1924.

Comprehensive method of testing variable speed, variable
load gasoline engines. 10:303-307. May, 1918.

Efficiency of the internal combustion engine. 9:313-318.
May, 1917.

Factor tests of an internal combustion engine. 20:96-97;
116. Mar. 1929.

Fuel and air mixing devices for internal combustion engines.
12:96-105. Jan. 1921.

Gas engine operating data. 5:51-58. Jan. 1913.

The M.E.P. of gas engine. 8:216-227. Mar. 1916.

Mean effective pressure. 6:256-265. May, 1914.

Some power requirements of aircraft. 13:223-234. May, 1922.

Soothing the internal combustion engine. 17:50-51.
Jan. 1926.

What price knock. 18:54-55;72. Jan. 1927.

Role of the aerodynamical laboratory in the development of
aeronautics. S. V. James. 4:101-112. Jan. 1912.

Rolling mills

Electric driving of rolling mills. W. T. Dean. 3:84-
102. Jan. 1911.

Roosevelt road viaduct. Morris Grodsky. 12:173-188.

Mar. 1921.

Roscolite ores

Recovery of vanadium from roscolite ores. A. H. Carpenter.
13:184-195. Mar. 1922.

Rosenthal, H. I.

A new system of direct current motor control. 12:145-157.
Mar. 1921.

Rubber

Technical man in the rubber industry. A. H. Smith. 15:
15-16;32. Nov. 1923.

Rutherford, Sir E.

Collision of α -particles with light atoms. 11:34-44.
Nov. 1919.

Sabine, R. E.

Insulation of sound by double partitions. 17:131-133.
May, 1926.

Safety factor. W. F. Dietzsch. 3:103-105. Jan. 1911.

Safety goggles. S. V. James. 9:57-65. Nov. 1916.

St. Paul Union Depot. G. H. Wilsey. 17:134-136;160;162.
May, 1926.

Salesmanship. H. C. Coffeen. 12:29-30. Nov. 1920.

Sampson, C. C.

Heat value calculator. 1:92-95. Jan. 1909.

Sanford, L. A.

By product coke ovens. 11:81-94. Jan. 1920.

A satisfactory method for the determination of benzene and
toluene in crude toluol. A. Pearson. 10:38-48.
Nov. 1917.

Saturated air

Properties of saturated air. G. F. Gebhardt. 1:196-
207. May, 1909.

Saunders, J. E.

Automatic block signaling. 13:71-85. Jan. 1922.

Railway signaling. 10:308-313. May, 1918.

Signaling for interurban electric railways. 7:249-263.
May, 1915.

Savelsberg converter. 4:176. May, 1912.

Schaeffer, A. Jr.

Hunters in the dark. 19:34;36. Nov. 1927.

Schedules

Working. 1:29. Jan. 1909.

Delivery. 1:32. Jan. 1909.

Organization. 1:31. Jan. 1909.

Progress. 1:35. Jan. 1909.

Schenectady Power Co's hydraulic turbine units. Stanley
Dean. 3:139-160. May, 1911.

Scherger, Dr. G. L.

American ideals. (editorial) 10:338-345. May, 1918.
(Editorial). 6:287-288. Mar. 1914.

Mission of culture. 14:71-72. Mar. 1923.

Reconstruction during and after the war. (editorial)
10:136-138. Jan. 1918.

- Schommer, J. J.
 Building and operating a cider vinegar plant. 12:1-16.
 Nov. 1920.
 Trend of modern intercollegiate athletics. 12:45-49.
 Nov. 1920.
 Garbage reduction plant of Columbus, Ohio. 9:319-331.
 May, 1917.
 How to prepare uncalled manpower. (editorial) 10:254-257. Mar. 1918.
 Vinegars. 9:30-34. Nov. 1916.
- Schwartz, H. A.
 What and why is malleable iron. 11:95-110. Jan. 1920.
- Schweitzer, W. E.
 Model aeroplanes. 16:16;30. Nov. 1924.
- Scientific management
 Application of scientific management to the problems of the factory. 9:102-119. Jan. 1917. 9:249-267. Mar. 1917.
- Scott, Walter Diel
 Mutual benefits. A letter. 17:91. Mar. 1926.
- Selection of electrical equipment for steel mills. T. M. Sturgess. 5:67-78. Jan. 1913.
- Secret of the machines. (poem) Rudyard Kipling. 12:114-115. Jan. 1921.
- See, Pierre V. C.
 Twenty years of electric railroading. 17:9-11. Nov. 1925.
- Sewerage disposal
 Garbage reduction plant of Columbus, Ohio. J. J. Schommer. 9:319-331. May, 1917.
 Modern sewage treatment in the sanitary district of Chicago. F. W. Mohlman. 16:9-12;29-30. Nov. 1924.
 Northside sewage treatment plant. H. E. Larson. 19:49-50;56. Jan. 1928.
- Sewage plants, see Sewerage disposal
- Seyferlich, W. M.
 Electrical induction furnace. 11:211-221. Mar. 1920.
 Electricity, the wonder worker. 11:318-326. May, 1920.
- Shaffer, C. L.
 Chicago traffic signal system. 19:122-124;138. May, 1928.
- Shedd, M. C.
 Impact machine and its equipment for testing draft gears. 1:251-259. May, 1909.
- Shock, electrical, see Electrical shock.

Shock absorption

Automobile-tire shock absorption machine. 12:31. Nov. 1920.

Shoveling machinery

The steam shovel. E. R. Weber. 5:214-222. May, 1913.

Shubart, Benedict

Mechanical loading in underground coal mines.

17:15-16;34. Nov. 1925. 17:53-56;71. Jan. 1926.

17:103-106. Mar. 1926. 17:137-139;164. May, 1926.

Preparation of coal for the western market. 16:51-53.
Jan. 1925.

Shuler, C. R.

Municipal versus public utility operation of an electric
lighting plant. 17:17-18;34. Nov. 1925.

Sieck, Herbert

Oil hydrogenation. 14:13-15. Nov. 1922.

Signals and signaling

Automatic block signaling. J. E. Saunders. 13:71-85.
Nov. 1922.

Railway signaling. J. E. Saunders. 10:308-313. May, 1918.

Signaling for interurban electric railways. 7:249-263.
May, 1915. J. E. Saunders.

The significance of the fine arts. (book review). E. H.

Reed, Jr. Published under direction of Amer. Inst.
of Archs. 1923. 14:113. May, 1923.

Sillcox, L. K.

Making work a game. 12:106-111. Jan. 1921.

Siloxide

Siloxide an unrivalled substitute for quartz glass. Dr.

I. F. Thomas. 5:79-89. Jan. 1913.

Silver, E. I.

Design and construction of a seven story reinforced
concrete mercantile building. 4:85-100. Jan. 1912.

Simpson, H. N.

Automatically controlled substations. 8:326-335. May, 1916.

Simpson, T. W.

Factory power. 2:164-175. May, 1910.

Sims, William F.

Calumet station of the Commonwealth Edison Co. 13:151-
159. Mar. 1922.

Underground conduit for the distribution of electrical
energy. 1:182-195. May, 1909.

Sitka region, see Alaska.

16,000,000 business letters last week. T. H. B.

Whipple. 19:81-82. Mar. 1928.

Sklowsky, Max

Combustion of fuel oil. 11:269-279. May, 1920.

Skyscrapers. A. N. Rebori. 4:52-64. Jan. 1912.

Slide rules

Spitzglass computer for the flow of fluids in pipes.
7:33-40. Nov. 1914.

Smith, A. H.

Technical man in the rubber industry. 15:15-16;32.
Nov. 1923.

Smith, F. U.

Resignation. 11:330-331. May, 1920.

Smith, M. A.

Engineer as a salesman. 17:102. Mar. 1926.
Test of slender wooden struts for aeroplanes. 2:242-
243. May, 1910.

Smith, S. H.

Army and civilian methods of handling materials in Panama.
8:298-304. May, 1916.

Smith, S. M.

Substructure of the Wabash Rouge River Bridge at Detroit,
Mich. 13:250-255. May, 1922.

Smith, W. G.

High speed steel and its heat treatment. 2:110-122.
Jan. 1910.

Smoke, soot and dirt in steam generation. P. A. Poppen-
husen. 8:179-182. Jan. 1916.

Snow, J. E.

Color photography. (editorial) 6:225-227. Mar. 1914.
A reminiscence. (editorial) 13:270-271. May, 1922.

Some mechanical features in the new Cook County Hospital.
H. A. Durr. 7:41-50. Nov. 1914.

Some new buildings of the Chicago railways company. E. F.
Hiller. 1:230-244. May, 1909.

Some practical considerations in the fabrication of steel
bridges. R. W. Johnson. 5:59-66. Jan. 1913.

Soper, Ellis

Crushing plants. 1:161-181. May, 1909.

South Chicago City Railway, see H. R. Badger -- Work of
valuation of an electric railway property.

South Kedzie Avenue (Chicago, Ill.) reinforced concrete
Arch bridge. J. C. Penn. 2:99-107. Jan. 1910.

South side retrospect. J. C. Peebles. 18:5-7;30. Nov. 1926.

Spanish -- study of

Necessity for studying Spanish in American schools.

J. S. L. Waddell (editorial) 8:83-88. Nov. 1915.

Specifications. W. G. Leininger. 2:176-196. May, 1910.

Specifications. (editorial) A. E. Phillips. 6:139-141.
Jan. 1914.

Specifications. Bids. M. B. Wells. 17:45-46. Jan. 1926.

Speed control for small motors. H. W. Nichols. 6:23-26.
Nov. 1913.

Spitzglass, J. M.

Construction and use of logarithmically ruled coordinates;
general diagrammatic solution of gas problems. 2:123-
139. Jan. 1910.

Flow of fluids and frictional resistance in pipes.

9:223-231. Mar. 1917. 9:302-312. May, 1912.

Inventor of computer for the flow of liquids in pipes.
7:33-40. Nov. 1914.

Measuring the flow of liquids electrically. J. M. Spitz-
glass and E. H. Freeman. 14:73-74;79-80;94. Mar. 1923.

Physical interpretation of thermodynamic principles.
7:192-199. Mar. 1915.

Sprinklers. 4:226-245. May, 1912.

Sprinkling systems

Life of automatic sprinklers. C. K. Alling. 4:131-137.
Jan. 1912.

Sladeker, G. I.

Electric lighting plants in small villages. 8:238-244.
Mar. 1916.

Stadiums

Chicago Stadium -- Grant Park. 16:27-28. Nov. 1924.

Northwestern University Stadium. J. R. Griffith. 18:12-
13. Nov. 1926.

Stage lighting. F. H. Juergensen. 20:52-53;66;68. Jan. 1929.

Standpipes

Interior standpipes and hose systems. N. F. Kimball.
9:10-23. Nov. 1916.

Stantial, G. B.

High grade malleable iron. 18:50-52;58. Jan. 1927.

Steam shovel. E. R. Weber. 5:214-222. May, 1913.

Steam power plants

Calumet station of the Commonwealth Ed. Co. W. F. Sims.
13:151-159. May, 1909.

Steel

- Manufacturing of manganese steel castings. B. S. Carr. 10:155-186. Mar. 1918.
- "Pittsburgh plus" Frank Emerick. 14:9-12;16-17. Nov. 1922.
- Heat treatment of high speed steel. W. G. Smith. 2:110-122. Jan. 1910.
- Heat treatment of high speed steel. W. H. Weinwurm. 16:57-58. Jan. 1925.

Steel works

- Selection of Electrical equipment for steel mills. F. M. Sturgess. 5:67-78. Jan. 1913.

Steinmetz, Dr. C. F.

- Address to students of AIT. 11:142-146. Jan. 1920.
- Charles Steinmetz. J. H. Goodmanson, E. A. Klein, P. O. Peckham. 15:141-143;154. May, 1924.

Stephenson, L. J.

- A new system of direct current motor control. H. I. Rosenthal. 12:145-157. Mar. 1921.

Stevens, A. B.

- Boy surveyors in Wisconsin. 19:15;30. Nov. 1927.

Stevens, H. D.

- Submarine radio-telegraphy. 11:12-16. Nov. 1919.

Stier, H. E.

- Ballistic engineering. 20:94-95. Mar. 1929.

Stiff, C. K.

- Building to reduce fire losses. 18:130-132;152. May, 1927.

Stineman, Capt. N. M.

- Misuse of the word engineer. (editorial) 10:140-141. Jan. 1918.
- Preparing a city building code. 17:52;68;70. Jan. 1926.

Storage

- Fire hazards in fuel storage. R. E. Kilbourne. 20:138-139;158. May, 1929.

Storage batteries

- Storage batteries. W. L. Borroughs. 11:222-231. Mar. 1920.
- Storage batteries for small electrical central station power plants. H. B. Marshall. 5:104-108. Jan. 1913.
- Hydrometer in the operation of storage batteries. L. H. Flanders. 1:143-160. May, 1909.
- Upkeep and repair of storage batteries. 14:77-78;84. Mar. 1923.

Storage batteries - charging

- The tantalum electrolytic valve. C. E. Stryker. 16:54-56;73. Jan. 1925.

Store buildings

- Modern Berlin dept. store. H. Bischof. 8:52-57. Nov. 1917.

Street railways

Low tension feeder systems for street railways. R. H. Rice. 4:113-123. Jan. 1912.

Streets

Some creosoted wood block pavements in Chicago. A. F. Harvey. 4:215-225. May, 1912.

Specifications of the Bureau of Streets. W. G. Leininger. 2:176-196. May, 1910.

Stresses in ships. S. N. James. 10:281-301. May, 1918.

String-lining high speed curves. (railroad) F. B. Farrell. 20:92-93. Mar. 1929.

Stryker, C. E.

Application of protective relays to central station practice. 12:17-28. Nov. 1920.

Tantalum electrolytic valve. 16:54-56;73. Jan. 1925.

Sturgess, F. M.

Selection of electrical equipment for steel mills. 5:67-78. Jan. 1913.

Sturtevant, R. W.

Civil engineering corps of the navy. 17:129-130;160. May, 1926.

Submarine radio telegraphy. H. D. Stevens. 11:12-16. Nov. 1919.

Substations

Application of automatic substations to interurban lines. 12:91-95. Jan. 1921.

Central station system substation. E. W. Grover. 10:81-106. Jan. 1918.

Success

Decisions and their relation to success. G. W. Thompson. 19:10;14;30;36. Nov. 1927.

Sugar industry and trade.

McMullen process for sugar manufacture. Harry McCormack. 3:250-258. May, 1911.

Sugar manufacture

A new method of sugar manufacture. E. W. McMullen. 1:260-267. May, 1909.

Sulphuric acid pickling solutions for iron and steel

containing arsenic. W. E. Wiard. 9:145-150. Jan. 1917.

Summer camp, see Field practice in surveying.

A summer hiatus. 17:5-6;32. Nov. 1925.

Sunny, B. E.

Greater contest. 13:37-39. Nov. 1921.

Symbolic representation of alternating current quantities.

H. W. Nichols. 4:45-51. Jan. 1912.

Synthetic phenol manufacture. C. C. Heritage. 9:216-222.

Mar. 1917.

Tact. (editorial) 16:19. Nov. 1924.

Tallmadge, T. E.

History of architecture in Illinois. 15:97-98;114. Mar. 1924.

Some achievements of ancient architects. 2:158-163. May, 1910.

Tanks, reinforced concrete

A 100,000 gallon reinforced concrete tank. T. J. Terreny.

5:159-166. May, 1913.

Tantalum electrolytic valve. C. R. Stryker. 16:54-56;73.

Jan. 1925.

Taxes

Valuation for taxes and for rate of return. (editorial)

1:137-139. May, 1909.

Taylor, E. S.

Plan of Chicago. 17:7-8;30. Nov. 1925.

Taylor, Fitzhugh

Automatic control of fire. 4:226-245. May, 1912.

Technical man in the rubber industry. A. H. Smith. 15:15-

16;32. Nov. 1923.

Technical reports

Water powers of south eastern Alaska. Leonard Lundgren.

8:30-43. Nov. 1915. 8:245-257. Mar. 1916. 8:358-366.

May, 1916.

Technical schools of the Illinois section on industrial

training for war emergency council of national defence.

See Council of National Defence.

Teescale, C. H.

Preservation of wood from decay. 7:200-208. Mar. 1915.

Telegraph printer. Morkrun. 7:308-315. May, 1915.

Telephone cables

Telephone cable manufacture. R. E. Vennig. 19:129-130;

146;156. May, 1928.

Telephone call. J. W. Cohn. 9:35-44. Nov. 1916. 9:179-

187. Jan. 1917.

Telephone practice

General description of the apparatus of the power plant employed in modern telephone practice. 10:314-332. May, 1918.

Telephone and switch boards.

A telephone call. J. W. Cohn. 9:35-44. Nov. 1916. 9:179-187. Jan. 1917.

Telephone

Telephone engineering. A. P. Allen. 15:88-90;114. Mar. 1924.

Telescope

Fifty foot interferometer telescope. T. G. Peace. 16:125-126. May, 1925.

The 100 inch Hookes reflecting telescope of the Mount Wilson Observatory. 11:307-316. May, 1920.

Temperature, Measurement

The elastic limit by temperature measurement. J. C. Peebles. 6:272-276. May, 1914.

Measurement of temperature. 3:70-83. Jan. 1911.

Terpene, see Pine oil

Terpeneol, see Pine oil.

Testing laboratories

Mechanical engineering department. G. F. Gebhardt. 12:31-40. Nov. 1920.

Theaters

Heating and ventilation of theater auditoriums. W. T. Braun. 9:45-56. Nov. 1916.

Thermal conductivity

Design, construction and calibration of apparatus proposed for advanced improvement in the thermal conductivity tests. B. S. Carr. 9:120-136. Jan. 1917.

Thermal conductometer. 12:34-35. Nov. 1920.

Thermal couples

Design, construction and calibration of apparatus proposed for advanced improvements in thermal conductivity tests. B. S. Carr. 9:120-136. Jan. 1917.

Thermodynamics

Physical interpretation of thermodynamic principles. J. M. Spitzglass. 7:192-199. Mar. 1915.

Thermometers and thermometry

Temperature and the manufacture of the thermometer. S. S. Amdursky. 17:140-144. May, 1926.

The thing that couldn't be done. (poem) 15:8. Nov. 1923.

The Thinker. Berton Braley. (poem) 12:52. Nov. 1920.

Thoelecke, L. C.

Business and the engineer. 18:134;154. May, 1927.

Thomas, H. B.

Reflex stimulation or management of electrical shock.
6:37-46. Nov. 1913.

Thomas, Dr. I. F.

Siloxide, an unrivalled substitute for quartz glass.
5:79-89. Jan. 1913.

Thomas, L. G. L.

Centrifugal pump efficiency. 18:88-90;116. Mar. 1927.

Thomas electric gas meter. R. H. Earle. 11:181-194.
Mar. 1920.

Thompson, G. W.

Decisions and their relation to success. 19:10;14;30;
36. Nov. 1927.

Thompson, J. S.

Radioactivity and atomic structure. 18:91-93;97.
Mar. 1927.

Thury system

High tension direct current transmission. Francis
Fernandez. 5:185-194. May, 1913.

Timbering

Some observations on lumber and timber. D. F. Holtman.
17:12-14;32. Nov. 1925.

Tin

A new volumetric method for tin. W. W. Patrick and G. C.
Wilsnack. 5:45-50. Jan. 1913.

Toluene

Satisfactory method for the determination of benzene
and toluene in crude toluol. A. Pearson. 10:38-48.
Nov. 1917.

Toluol, see toluene

Topographical survey of reservoir lands on Broad River,
South Carolina. Stanley Dean. 2:86-95. Jan. 1910.

Tousley, V. H.

Electrical inspection. 6:247-255. May, 1914.

Track capacity and rapid transit service. (editorial)
1:140-142. May, 1909.

Traffic regulations

"Through traffic" street system. H. E. Young. 17:113;
120. Mar. 1926.

Traffic signals

Chicago traffic signal system. C. D. Shaffer. 19:122-124;138. May, 1928.

Transmission and contact system used on the electrified divisions of the C.M.&St.P.Ry.Co. Marston Curtis. 8:3-9. Nov. 1915.

Transmission equipment for radio telephone broadcasting. E. L. Nelson. Pt.1. 16:93-94;109. Mar. 1925. Pt.2. 16:131-133;151. Mar. 1925.

Tribute of the underwriters. 13:43-46. Nov. 1921.

Trucks

Modern passenger trucks. W. C. Brubaker. 6:203-215. Mar. 1914.

Tuberculosis

Hunters in the dark. A. Schaeffer, Jr. 19:34;36. Nov. 1927.

Turbo-generator sets

General Electric Co. 18:107-110. Mar. 1927.

Tunnels and tunneling

The new southwest land and lake tunnel system of the Chicago waterworks. H. W. Clausen. 5:3-31. Jan. 1913.

Construction of a Chicago water tunnel. 18:57-58. Jan. 1927.

Latest tunnel connection near the Chicago Avenue pumping station, Chicago waterworks. 6:3-22. 1914.

Turbines

Developments in hydraulic turbines. R. E. Earle. Pt.1. 20:12-13;34. Nov. 1928. Pt.2. 20:54-78;80. Jan. 1929.

Efficiency tests of Schanectady Power Co's. Turbine units #2 and 3. Stanley Dean. 3:139-160. May, 1911.

Turkey red oil

Investigation of the essential constituents of turkey red oil and its derivatives. M. Voldenberg. 2:204-210. May, 1910.

Two Armour men in Europe. 5:90-97. Jan. 1913.

Ufer, H. G.

Underwriter's laboratories methods of inspection and checking at factories. 10:22-32. Nov. 1917.

Underground conduit for the distribution of electrical energy. W. F. Sims. 1:182-195. May, 1909.

Underwriter's laboratories

Method of inspection and checking at factories. H. G. Ufer. 10:22-32. Nov. 1917.

The service of Underwriter's laboratories. B. E. Blanchard. 13:27-36. Nov. 1921.

Underwriter's laboratories. O. R. Besch. 19:90-92. Mar. 1928.

Unger, P. R.

Upkeep and repair of storage batteries. 14:77-78;84.
Mar. 1923.

Unofficial observer. J. C. Feebles. 18:60;78. Jan. 1927.
18:98. Mar. 1927. 18:140. May. 1927.

Unsaturated air

Properties of unsaturated air. G. F. Gebhardt. 1:196-
207. May, 1909.

Upkeep and repair of storage batteries. P. H. Unger.
14:77-78;84. Mar. 1923.

Urban, J. W.

Relation of chemistry to the development of the petroleum
industry. 18:8-10;32;34. Nov. 1926.

Us engineers don't need no English. J. C. Feebles. 16:97-
98;114. May, 1929.

Utilities and educational institutions. G. R. Jones. 20:
8;32. Nov. 1928.

Utility commissions, see Public utility commissions.

Utilization of blast furnace gases. E. K. Hammond. 4:32-
44. Jan. 1912.

Vacuum gauge. 15:143-156. May, 1924.

Vacuum tubes

Vacuum tubes and their future. G. M. Wilcox. 14:91.
Mar. 1923.

Valuation for taxes and for rate of return. (editorial)
1:137-139. May, 1909.

Valuation of public utility property. Leslie Weiss. 12:
251-258. May, 1921.

Value of a hobby. William Hoskins (editorial) 7:146-147.
Jan. 1915.

Value of records to an operating engineer. R. S. Huey.
9:131-144. Jan. 1917.

Vandadium

Recovery of vanadium from rescolite ores. A. H. Carpenter.
13:184-195. Mar. 1922.

Van Etten, F. C.

Transmitted power for the farm. 11:195-207. Mar. 1920.

Variable load gasoline engines, see Gasoline engines.

Ventilation

Carventilation. D. I. Cook. 2:217-221. May, 1910.

Ventilation (cont'd)

Factors in ventilation. W. C. Armspach. 10:238-244.
Mar. 1918.

Forced ventilation and interpoles. (editorial) 1:9-11.
Jan. 1909.

Ventilation. (editorial) 1:9-11. Jan. 1909.

Inviting field of ventilation. W. E. Watt. 9:151-167.
Jan. 1917.

Vernor, R. E.

Snapshot at fire prevention. 14:6. Nov. 1922.

Sparks for the engineer. 15:140;152. May, 1924.

Viaducts

Roosevelt road viaduct. Morris Godsky. 12:173-188.
Mar. 1921.

Vinegars. J. J. Schommer. 9:30-34. Nov. 1916.

Vinegar plants

Building and operating vinegar plants. J. J. Schommer.
12:1-16. Nov. 1920.

Vining, R. E.

Telephone cable manufacture. 19:129-130;146;156. May,
1928.

Vocations

Making work a game. L. K. Sillcox. 12:106-111. Jan. 1921.

Volumetric efficiency of ammonia compressors. C. E. Beck.
6:114-125. Jan. 1914.

Volumetric method for tin. W. W. Patrick and G. C. Wils-
nack. 5:45-50. Jan. 1913.

Wabash Rouge River bridge at Detroit, Mich. S. M. Smith.
13:250-255. May, 1922.

Wafer heater and holder. 1:80. Jan. 1909.

Wagner, A. H.

Study of direct current motor defects. 13:256-267.
May, 1922.

Walls

Design of retaining walls. J. B. Johnson. 8:336-347.
May, 1916.

War activities at Armour. (editorial) 9:352. May, 1917.

Warehouses

Features of the New Fulton Market cold storage warehouse.
L. L. Edlund. 12:217-225. May, 1921.

A water cooled X-ray tube. 15:148;157. May, 1924.

Water meters

Cycloidal weir meters. Wm. Bready, Jr. 8:367-370.
May, 1916.

Water power

Water powers of Southeastern Alaska. Leonard Lundgren.
8:30-43. Nov. 1915. 8:245-257. Mar. 1916.
8:358-366. May, 1916.

Water softener. 9:174-178. Jan. 1917.

Water softening. Wm. Bready, Jr. 9:24-29. Nov. 1916.
9:168-178. Jan. 1917.

Water supply

Artesian water in the Orient. T. S. Ford. 3:56-61.
Jan. 1911.

Recent developments in boiler feed water treatment.
16:47-50;73. Jan. 1925.

Water treatment

Water softening. Wm. Bready, Jr. 9:24-29. Nov. 1916.
9:168-178. Jan. 1917.
See, also Water supply.

Water wheels

Forms of nozzles for impulse water wheels. A. H.
Anderson. 2:200-205. May, 1910.

Waterproofing of concrete. Arnold Pacyna. 6:186-202.
Mar. 1914.

Waterproofing of track elevations. C.B.&Q.R.R. G. G.
Haggander. 4:124-130. Jan. 1912.

Watt, W. E.

Inviting field of ventilation. 9:151-167. Jan. 1917.

Watt, W. T.

Diesel engines. 19:83-85. Mar. 1928.

WENR -- the last word in radio stations. H. H. Dozois.
20:136-137;156;158. May, 1929.

Weber, E. R.

The steam shovel. 5:214-222. May, 1913.

Weinwurm, W. E.

Heat treatment of high speed steel. 16:57-58. Jan.
1925.

Weirton stack. World's largest blast furnace. 18:147;
150. May, 1927.

Weiss, Leslie

Valuation of public utility property. 12:251-258.
May, 1921.

Wells, W. B.

Bids.. 17:45-46. Jan. 1926.

Stresses in aeroplanes during quick turns. 3:114-117.
Jan. 1911.

Western Union Telegraph Co.

New Chicago telegraph building. M. W. Drew and R. A.
Newlander. 12:166-172. Mar. 1921.

Westinghouse Nernst Lamp. A. L. Eustice. 1:73-91.
Jan. 1909.

Wetzel, G. F.

Cost accounting. 13:163-174. Mar. 1922.

Costs and the engineer. 12:158-165. Mar. 1921.

What and why is malleable iron. H. A. Schwartz. 11:95-
110. Jan. 1920.

What does a college man know? G. V. Bradbury. 13:119-
121. Jan. 1922.

What price knock. Daniel Roesch. 18:54-55;72. Jan. 1927.

Where kings have lived. J. H. Bischof. 5:97-103.
Jan. 1913.

Whipple, T. H. B.

16,000,000,000 business letters last year. 19:81-82.
Mar. 1928.

White, H. S.

Investigation of the effect of air conditions upon the
power of aviation engines. 12:135-144. Mar. 1921.

White, Linn

Chicago lake front development. 18:86087;116. Mar. 1927.

Whitman, Walt

O Captain, My Captain. 12:268. May, 1921.

Whitney, C. A.

Fire alarm systems. Pt. 1. 16:89-91;107. Mar. 1925.
Pt. 2. 16:134-136. May, 1925.

Wiard, W. H.

Efficiency of sulphuric acid pickling solution for iron
and steel containing arsenic. 9:145-150. Jan. 1917.

Willcox, G. M.

Vacuum tubes and their future. 14:91. Mar. 1923.

Will you need a job. (editorial) 14:24. Nov. 1922.

William Hale Thompson Pumping Station.

World's largest pumping station. M. B. Golber. 20:6-7;
26. Nov. 1928.

Wilsey, G. H.

Saint Paul Union Depot. 17:134-136;160;162. May, 1926.

Wilson, J. R.

Manufacture of pigments as seen by the insurance engineer.
5:147-156. May, 1913.

Wilson, W. R.

Morgan gas producer installation at Gary. 1:62-72.
Jan. 1909.

Organization and the individual. 9:3-9. Nov. 1916.

Wilson Observatory

The 100 inch Hookes reflecting telescope of the Mount
Wilson Observatory. 11:307-316. May, 1920.

Wing, H. R.

Engineer and the world's future. 13:196-198. Mar. 1922.

Wire rod rolling. J. S. Banta. 4:76-84. Jan. 1912.

Wire rope

Tests of wire rope fittings. P. C. Huntley. 19:51-52.
Jan. 1928.

Wireless telegraphy -- recent developments. Louis Cohen.
4:65-75. Jan. 1912.

Wohlauer "Fluxolite" diagram. 4:8. Jan. 1912.

Woldenberg, M.

Investigation of the essential constituent of Turkey red
oil, and its derivatives. 2:204-210. May, 1910.

Wolfley, C. E.

Experiences of an architect. 16:15;32. Nov. 1924.

Wood block paving. W. F. Harvey. 4:215-225. May, 1912.

Wood blocks for factory flooring and miscellaneous uses.
C. H. Teesdale. 8:258-265. Mar. 1916.

Wood preservation

Preservation of wood from decay. C. H. Teesdale. 7:
200-208. Mar. 1915.

Wood yard and wood room of the cellulose mill. C. C.
Heritage. 10:1-16. Nov. 1917.

Wooden struts for aeroplanes. M. A. Smith. 2:242-243.
May, 1910.

Words - words-words. Walter Hendrick. 19:45. Jan. 1928.

Work of valuation of an electric railway property. H. R.
Badger. 2:71-77. Jan. 1910.

Working schedule in

R. M. Henderson -- Personal system and the consulting engineer. 1:29. Jan. 1909.

World War 1917-18.

Honor roll V. 10. Nov. 1918.

Reconstruction during and after the war. (editorial)
10:136-138. Jan. 1918.

Wrangell region, see Alaska.

X-ray tubes

A water cooled X-ray tube. 15:148;157. May, 1924.

Young, H. E.

Proposed straightening of the Chicago River. 17:152-153. May, 1926.

"Through traffic street system". 17:113;120. Mar. 1926.

Youngberg, H. W.

Diagram of the flow of water in open channels. 2:108-109. Jan. 1910.

Youth and the new world. H. S. Houston. 15:52;72.
Jan. 1924.

Zack, Raymond

Road engineering. 11:208-210. Mar. 1920.

Zeder, J. C.

Automobile testing. 20:50-51;70;72;74. Jan. 1929.

Zenner, W. J.

After graduation. What? 19:53-54;56. Jan. 1928.

One of the great religions of the world. 18:56;74.
Jan. 1927.

Zinc blende

Flotation. Winning zinc blende. H. B. Pulsifer.
8:140-152.

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